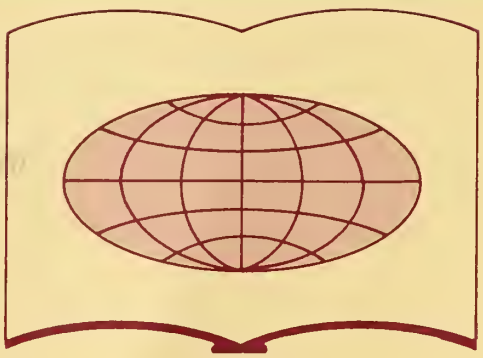
Historic, Archive Document

Do not assume content reflects current
scientific knowledge, policies, or practices.

SHOUT
SHARE
IT

71
3
CRK

Pesticides DOCUMENTATION BULLETIN



Volume 3 Number 25
DECEMBER 8, 1967

NATIONAL AGRICULTURAL LIBRARY · U.S. DEPARTMENT OF AGRICULTURE

Use Pesticides Safely

FOLLOW THE LABEL

U.S. DEPARTMENT OF AGRICULTURE

NATIONAL AGRICULTURAL LIBRARY

U. S. DEPARTMENT OF AGRICULTURE

A N N O U N C E M E N T

This issue of the Pesticides Documentation Bulletin introduces a new computer generated current awareness service. Through the Pesticides Information Center's Update, Publication and Search (PICUPS) system, a categorized bibliographic citation file, accompanied by subject, author, organization and biographical indices will be issued bi-weekly.

All elements of the citations maintained in this mechanized file system are searchable by computer. In addition to the printed subject descriptors appearing in the Bulletin, other subject descriptors are incorporated in the tape file system as machine searchable but non-printable items. In the early issues some of these subject terms appear in the Bulletin as duplications. These duplications will be eliminated in later programs.

Since retrospective information was not previously published in searchable form, the next several issues of the Bulletin will contain selected coverage of pest control literature issued between 1960 and 1966. Additional retrospective material will be incorporated in future bulletins through the special bibliographies prepared by the Center. Current pest control literature will receive comprehensive coverage. Future expansion will include selected abstracts when such abstracts appear in the source document.

Recipients of this introductory issue are invited to send their comments and suggestions for its improvement to the U.S. Department of Agriculture, National Agricultural Library, Pesticides Information Center, 4112-Auditors Building, Washington, D. C. 20250. These comments together with computer produced statistical analyses will provide the bases for future changes.

Blanche L. Oliveri

Blanche L. Oliveri
Acting Director
National Agricultural Library

PESTICIDES DOCUMENTATION BULLETIN

A BI-WEEKLY PUBLICATION OF

U. S. DEPARTMENT OF AGRICULTURE

Volume 3 | December 8, 1967 | Number 25

OBJECTIVES AND SCOPE

The Pesticides Documentation Bulletin is compiled by the Pesticides Information Center, the first of its kind to be established within a national library. It is a bi-weekly index to the literature on pests and their control and the impact on the economy and man's total environment. The index includes literature on diseases, insects, nematodes, parasites, weeds, and other pests affecting plants, animals, man, our natural resources, and other values in man's environment. Literature on biological, chemical, cultural ecological, mechanical, and integrated methods of pest control will be included. Special emphasis is given to the literature on the toxicological, physiological and epidemiological aspects of pests and their control by chemical and nonchemical methods.

For broader coverage of literature on agriculture and related subjects, please consult the Bibliography of Agriculture, a monthly publication of the National Agricultural Library.

FORMAT

The Bulletin is a categorized bibliography, with citations arranged alphabetically by author under the following major subjects:

10 Entomology
20 Crop Protection
30 Livestock Protection
40 Commodity Protection
50 Environmental Contamination
55 Residues
60 Toxicology
65 Plant Physiology & Biochemistry
70 Chemistry
80 Engineering
90 Industry

Citations: Each citation consists of an accession number assigned serially with the last two digits representing the Bulletin's issue year, i.e. 3286-67. The citation number (minus the year) is used in all indices. Following the accession number is the full title of the article; all personal authors; an abbreviated journal title; volume, issue and inclusive page numbers; date of publication; language abbreviation, if other than English; and the National Agricultural Library's call number. Subject descriptors, patent or grant numbers, bibliographer's notes, and abstracts or extracts may follow each citation when appropriate.

Subject Index: Subject descriptors appear in the index followed by title arranged numerically by accession number. The Agricultural/Biological Vocabulary developed by the National Agricultural Library is used as a basic thesaurus of descriptors.

Biographical Index: Names of first authors are arranged alphabetically, followed by organizational affiliation and accession number.

Author Index: Names of personal authors are arranged alphabetically, followed by accession numbers of pertinent citations.

Organizational Index: Names of corporate authors or sponsoring organizations are arranged alphabetically followed by accession numbers of pertinent citations.

AVAILABILITY OF REFERENCES CITED

Search Requests

Each item appearing in the current format of the Bulletin is maintained in magnetic tape files which are fully searchable.

Search requests may be submitted to:

U.S. Department of Agriculture
National Agricultural Library
PESTICIDES INFORMATION CENTER
Room 4112 - Auditors Building
Washington, D.C. 20250

Loans

Most of the material in the National Agricultural Library collection may be borrowed by employees of the Department of Agriculture and by other libraries. In requesting loans, please include the Library call number found with the citation. Loan of periodicals is restricted to the Washington, D. C. area. Foreign statistical publications and rare books are loaned only by special arrangement.

Free Distribution

U.S.D.A. publications: Domestic requests for publications of the United States Department of Agriculture will be supplied free to libraries and other qualified agencies and organizations upon application to the United States Department of Agriculture, Office of Information, Washington D. C. 20250, as long as the supply lasts. Foreign institutions, organizations and agencies which issue publications may obtain U.S.D.A. publications in exchange by writing to the United States Department of Agriculture, National Agricultural Library, Exchange Unit, Washington, D.C., 20250.

State Agricultural Experiment Station and Extension Service publications are available except where noted, and as long as the supply lasts, from the issuing station or service. The National Agricultural Library does not distribute them; however, reproductions are available at regular Library rates.

Reproduction

All articles listed may be obtained in microfilm or photoprint form from the United States Department of Agriculture, National Agricultural Library, Photoduplication Section, Washington, D. C., 20250. Copying charges for each periodical or book are:

MICROFILMS: $1.00 for each 30 pages or fraction copied from a single article or book.

PHOTOPRINTS: $1.00 for each 4 pages or fraction copied from a single article or book.

RUSH SERIVICE: Will be furnished upon payment of $1.00 additional for each order.

Payment must accompany the order. Cash, Library coupons, check or money order drawn to the National Agricultural Library, U.S.D.A., are acceptable. Payment for orders originating outside of the United States should be made by American bank, or by UNESCO book coupons. Superintendent of Documents coupons and requests to furnish photocopy to be paid from Superintendent of Documents Deposit funds cannot be honored. Credit may be extended only to Government agencies and institutions. Billing address should be indicated.

Library Coupons

National Agricultural Library coupons, valued at $1.00 each, may be purchased in any quantity.

For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C., 20402. $14.00 per year, domestic; $17.50 per year, foreign. Single copies vary in price.

Use of funds for printing this publication approved by the Director of the Bureau of the Budget (March 29, 1966).

PLEASE GIVE COMPLETE BIBLIOGRAPHIC INFORMATION AS IT APPEARS IN THIS PUBLICATION FOR EACH ITEM REQUESTED.

ACKNOWLEDGMENT

The Pesticides Information Center, National Agricultural Library, gratefully acknowledges the cooperation and assistance of the Department of Defense; Health, Education, and Welfare; and Interior; the Federal Committee on Pest Control, and state and industrial organizations in the development of the Center and preparation of this Bulletin. Special thanks are expressed to the Federal Committee on Pest Control for its suggestions and support. We hope the Bulletin will serve as an example of the effectiveness of interdepartmental cooperation and the speed with which effective services can be developed through a coordinated and cooperative interdepartmental effort.

10 ENTOMOLOGY

I-67
THE TWIG OAK WASP OF CORK OAK- ITS BIOLOGY AND CONTROL.
S F Balley L A Stange
J Econ Entom 59(3):663-668
Jun 1966 421 JB22
Biology, Plaglotrochus suberi, Quercus suber, Quercus suber, Twlg wasp.

Systematics

2-67
INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE: NOTICE OF PROPOSED USE OF PLENARY POWERS IN CERTAIN CASES (A.(N.S.)50).
Can Entom 94(2):221-222
Feb 1962 421 C16
Insect taxonomy,
Internatlonai Commlssion on Zoologlcal Nomenclature.

3-67
INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE: NOTICE OF PROPOSED USE OF PLENARY POWERS IN CERTAIN CASES (A.(N.S.)S1).
Can Entom 94(2):222
Feb I962 421 CI6
Insect taxonomy,
Internationai Commission on Zoologlcal Nomenciature.

4-67
OBSERVATIONS ON HYPERA BRUNNEIPENNIS (COLEOPTERA: CURCULIONIDAE) AND CERTAIN OF ITS NATURAL ENEMIES IN THE NEAR EAST.
R van den Bosch
J Econ Entom 57(2):194-197
Apr I964 421 JB22
Coleoptera, Curculionidae, Hypera brunnipennis, Predaceous insects.

S-67
SEASONAL BIOLOGY OF THE BALSAM WOOLLY APHID ON MT. MITCHELL, NORTH CAROLINA.
G D Amman
J Econ Entom SS(1):96-98
Feb 1962 421 JB22
Biology, Chermes piceae, Chermes plceae, Weather.

6-67
PEAR LEAF SCORCH AND ORCHARD MITES.
D Asquith
J Econ Entom 57(3):420-421
Jun 1964 421 JB22
Panonychus uimi (Koch), Pear ieaf scorch, Tetranychus telarius (L.).

7-67
A CONTRIBUTION TO THE KNOWLEDGE OF FLIGHT MUSCLE CHANGES IN THE SCOLYTIDAE (COLEOPTERA).
M D Atkins S H Farrls
Can Entom 94(1):25-32
Jan 1962 42I CI6
Coleoptera, Dendroctonus pseudotsugae, Dendroctonus pseudotsugae Hopk., Insect fllght, Insect morphology, Scoiytidae.

8-67
POPULATION DYNAMICS OF SPIDER MITES INFLUENCED BY DDT. .
H H Attiah H B Boudreaux
J Econ Entom 57(1):S3-57, TABS.
Feb I964 42I JB22
DDT , Insect demography, Tetranychidae, Tetranychus telarlus, Tetranychus urticae.

9-67
PREDICTING THE SIZE OF EUROPEAN CORN BORER INFESTATIONS (OSTRINIA NUBILALIS HBN.).
C A Barlow
Can Entom 95(I2):I2BS-1292
Dec I963 421 C16
Insect infestation, Ontario, Ostrinia nubilaiis, Ostrinia nubiialis.

10-67
INSECT PARASITE AND PREDATOR STUDIES IN A DECLINING SAWFLY POPULATION.
M L Bobb
J Econ Entom 5B(S):925-926
Oct I96S 42I JB22
Neodiprion pratti, Parasitlc insects, Predaceous insects.

11-67
RECENT RESEARCH ON THE BOLL WEEVIL IN NORTHERN SONORA, MEXICO, AND THE THURBERIA WEEVIL IN ARIZONA.
G T Bottger W H Cross W E Gunderson G P Wene
J Econ Entom S7(2):2B6-290, TABS.
Apr I964 42I JB22
Anthonomus grandis, Anthonomus grandis, Anthonomus grandis thurberiae, Anthonomus grandis thurberiae, Arizona, Mexlco.

12-67
EFFECT OF NITROGEN LEVELS ON RICE WATER WEEVIL POPULATIONS.
C C Bowling
J Econ Entom 56(6):B26-B27
Dec 1963 421 JB22
Insect populations, Lissorhoptrus oryzophilus, Lissorhoptrus oryzophiius (Kuschel), Nitrogen.

13-67
NOTE ON THE MOVEMENTS OF THE MANDIBULAR AND MAXILLARY STYLETS OF THE APHID, MYZUS PERSICAE (SULZER).
R H E Bradley E S Syivester C V Wade
Can Entom 94(6):6S3-654
Jun I962 421 C16
Glands (insects), Insect taxonomy, Myzus persicae, Myzus persicae (Sulzer), Styiets.

14-67
ADULT ELATERIDAE OF SOUTHERN ALBERTA, SASKATCHEWAN AND MANITOBA (COLEOPTERA).
A A Brooks
Can Entom 92, SUPPL. 20
1960 421 C16
Alberta, Coleoptera, Elateridae, Elateridae, Manitoba, Saskatchewan.

15-67
AN ANNOTATED LIST OF THE HIPPODAMIINI OF NORTHERN AMERICA WITH A KEY TO THE GENERA (COLEOPTERA: COCCINELLIDAE).
W J Brown R de Ruette
Can Entom 94(6):643-652
Jun I962 42I CI6
Coccinellidae, Coleoptera, Hippodamiini, Insect morphoiogy, Insect taxonomy.

16-67
A NEW SPECIES OF EUXOA HBN. (LEPIDOPTERA: NOCTUIDAE) FROM THE SIERRA NEVADA IN CALIFORNIA.
J S Buckett Wm R Bauer
Can Entom 96(7):967-970
Jui 1964 421 CI6
California, Euxoa brunneigera iatebra, Euxoa pinlae, Lepidoptera, Noctuidae.

17-67
THE NEARCTIC SPECIES OF THE XYSTICUS LABRADORENSIS SUBGROUP (ARANEAE: THOMISIDAE).
D J Buckle J H Redner
Can Entom 96(B):1I3B-1142
Aug 1964 42I CI6
Araneae, Thomisidae, Xysticus iabradorensis.

18-67
DETERMINING TRENDS IN WESTERN SPRUCE BUDWORM EGG POPULATIONS.
P E Buffam V M Carolin Jr
J Econ Entom S9(6):1442-1444
Dec 1966 421 JB22
Choristoneura fumiferana, Choristoneura fumiferana, Insect eggs.

10 19-67

19-67
OBSERVATIONS ON THE EFFECTIVENESS AND BIOLOGY OF THE EUROPEAN PREDATOR LARICOBIUS ERICHSONNII ROSEN (COLEOPTERA:DERODONTIDAE) IN OREGON AND WASHINGTON.
P E Buffam
Can Entom 94(5):461-472
May 1962 421 C16
Adelges piceae Ratz, Chermes piceae, Coleoptera, Derodontidae, Insect biology, Laricobius erichsonii Rosen, Predaceous insects.

20-67
THE PROVANCHER SPECIES OF CHALCIDOIDEA (HYMENOPTERA).
B D Burks
Can Entom 95(12):1254-1263
Dec 1963 421 C16
Chalcidoidea, Hymenoptera.

21-67
THE NATURAL ENEMIES OF THE LETTUCE ROOT APHID, PEMPHIGUS BURSARIUS (L.).
J A Dunn
Bull Entomol R 51(2):271-278
Jul 1960 421 B87
Lettuce, Pemphigus bursarius (L.).

22-67
THE BIOLOGY OF OLIGONYCHUS PLATANI ON PYRACANTHA.
G Butler Jr M Abid
J Econ Entom 58(4):687-688
Aug 1965 421 J822
Oligonychus platani (McGregor), Pyracantha.

23-67
THE BIOLOGY OF SPANOGONICUS ALBOFASCIATUS.
G D Butler Jr A Stoner
J Econ Entom 58(4):664-665
Aug 1965 421 JB22
Black fleahopper, Spanogonicus albofasciatus (Reuter).

24-67
THE LOOPER COMPLEX IN ALABAMA (LEPIDOPTERA PLUSIINAE).
T D Canerday F S Arant
J Econ Entom 59(3):742-743
Jun 1966 421 JB22
Alabama, Geometridae, Lepidoptera, Plusiinae, Trichoplusia ni (Huebner).

25-67
A NOTE ON GLOSSINA MEDICORUM AUST. (DIPTERA) IN GHANA.
R F Chapman
Bull Entomol R 51(3):435-440
Nov 1960 421 BB7
Diptera, Ghana, Glossina medicorum Aust..

26-67
OBSERVATIONS ON THE LIFE HISTORY OF ANTILOCHUS COCQUERBERTI, A PREDATOR OF DYSDERCUS KOENIGI.
A R Chauthani U S Misra
J Econ Entom 59(3):767-768, PL.
Jun 1966 421 J822
Antilochus cocquerberti, Dysdercus koenigi, Predaceous insects.

27-67
A NEW SPECIES OF PARAPROSALPIA VILLENEUVE (DIPTERA: ANTHOMYIIDAE) REARED FROM A BEETLE LARVA.
J G Chillcott H G James
Can Entom 98(7):699-702
Jul 1966 421 C16
Anthomyiidae, Diptera, Larvae, Paraprosalpia villeneuve.

28-67
A REVISION OF THE PLATYPALPUS JUVENIS COMPLEX IN NORTH AMERICA (DIPTERA: EMPIDIDAE).
J G Chillcott
Can Entom 94(2):113-143
Feb 1962 421 C16
Diptera, Empididae, Insect morphology, Platypalpus juvenis Melander.

29-67
A NEW HOST RECORD FOR THE SEEDWORM LASPEYRESIA TOREUTA, WITH NOTES ON ITS BIOLOGY.
W M Ciesla J C Bell Jr
J Econ Entom 59(4):1025-1026, PL.
Aug 1966 421 JB22
Host records, Insect biology, Laspeyresia toreuta, Seedworm.

30-67
OBSERVATIONS ON THE LIFE HISTORY OF TELENOMUS ALSOPHILAE, AN EGG PARASITE OF THE ELM SPANWORM, ENNOMOS SUBSIGNARIUS.
W M Ciesla
J Econ Entom 58(4):702-704
Aug 1965 421 J822
Egg parasite, Ennomos subsignarius, Ennomos subsignarius, Life cycle, Parasitism, Telenomus alsophilae Viereck.

31-67
ESTABLISHMENT OF APHYTIS HOLOXANTHUS AS A PARASITE OF FLORIDA RED SCALE IN FLORIDA.
D W Clancy A G Selhime M M Muma
J Econ Entom 56(5):603-605, TABS.
Oct 1963 421 J822
Aphytis holoxanthus DeBach, Chrysomphalus aonidum, Chrysomphalus aonidum (L.), Florida, Parasitic insects.

32-67
IMPROVED METHODS FOR MASS REARING PLUM CURCULIO, CONOTRACHELUS NENUPHAR.
J Econ Entom 59(1):235-236
Feb 1966 421 J822
Conotrachelus nenuphar, Conotrachelus nenuphar (Herbst), Insect rearing.

33-67
A NEMATODE PARASITE OF THE BOLL WEEVIL.
T C Cleveland
J Econ Entom 56(6):897
Dec 1963 421 J822
Anthonomus grandis, Anthonomus grandis Boheman, Hexamermis, Parasitism.

34-67
STATUS OF THE ALFALFA WEEVIL BIOLOGICAL CONTROL PROGRAM IN THE EASTERN UNITED STATES.
L W Coles B Puttler
J Econ Entom 56(5):609-611
Oct 1963 421 JB22
Bathyplectis curculionis (Thomson), Biological control (insects), Eastern United States, Hypera postica, Hypera postica (Gyllenhal), Microctonus aethiops (Nees), Tetrastichus incertus ratzburg.

35-67
LARVAL DESCRIPTIONS OF ZEIRAPHERA PACIFICA FREEMAN AND EPINOTIA HOPKINSANA (KEARFOTT) (LEPIDOPTERA: OLETHREUTIDAE).
S F Condrashoff
Can Entom 98(7):703-706
Jul 1966 421 C16
Epinotia hopkinsana (Kearfott), Insect anatomy, Insect morphology, Insect taxonomy, Larvae, Lepidoptera, Olethreutidae, Zeiraphera pacifica Freeman.

36-67
THE SPOTTED ALFALFA APHID IN WISCONSIN.
M S Conrad J T Medler
J Econ Entom 58(1):180-181
Feb 1965 421 JB22
Therioaphis maculata, Therioaphis maculata (Buckton), Wisconsin.

37-67
DIEL PERIODICITIES OF EMERGENCE AND OVIPOSITION IN RIVERINE TRICHOPTERA.
P S Corbet
Can Entom 98(10):1025-1034, TABS.
Oct 1966 421 C16
Emergence, Oviposition, Trichoptera.

38-67
SEASONAL FLIGHTS OF INSECT VECTORS OF SEVERAL PLANT VIRUSES IN SOUTHERN ARIZONA.
D L Coudriet D M Tuttle
J Econ Entom 56(6):865-868, TABS.
Dec 1963 421 J822
Arizona, Insect flight, Insect vectors, Plant disease transmission, Virus diseases (plants).

39-67
THE BIOLOGY OF PINEUS SIMILIS (GILL.) (HOMOPTERA: PHYLLOXERIDAE) ON SPRUCE.
M E P Cumming
Can Entom 94(4):395-408
Apr 1962 421 C16
Homoptera, Insect biology, Phylloxeridae, Picea, Picea, Pineus similis (Gill.).

40-67
A METHOD OF REARING SOUTHERN POTATO WIREWORM.
F P Cuthbert Jr
J Econ Entom 55(2):262-263
Apr 1962 421 JB22
Elateridae, Elateridae, Insect rearing, Insecticides, Potatoes.

41-67
SOME BIOLOGICAL ATTRIBUTES OF SAWFLIES IN THE NEODIPRION FULVICEPS COMPLEX IN A BRUSHFIELD PINE PLANTATION (HYMENOPTERA: DIPRIONIDAE).
D L Dahlsten
Can Entom 98(10):1055-1083, BIBL. 1081-1083, TABS.
Oct 1966 421 C16
Diprionidae, Diprionidae, Hymenoptera, Neodiprion fulviceps, Pinus.

42-67
MASS MARKING BOLL WEEVIL FIELD POPULATIONS.
T B Davich T C Cleveland E C Burt
J Econ Entom 58(5):1035-1037
Oct 1965 421 JB22
Anthonomus grandis, Insect identification, Labeling, Population.

43-67
A COMPARISON OF RADIOGRAPH ANALYSIS AND BARK DISSECTION IN ESTIMATING NUMBERS OF WESTERN PINE BEETLE.
C J DeMar Jr
Can Entom 95(10)1112-1116
Oct 1963 421 C16
Barking, Dendroctonus brevicomis, Dendroctonus brevicomis, Pinus ponderosa, Radiography.

44-67
NOTES ON THE ECOLOGY AND BIOLOGY OF THE CORN ROOT WEBWORM.
C B Dominick
J Econ Entom 57(1):41-42
Feb 1964 421 JB22
Crambus caliginoselius, Crambus caliginoselius, Insect biology, Insect ecology.

45-67
STUDIES OF ALEOCHARA TRISTIS (COLEOPTERA: STAPHYLINIDAE), A NATURAL ENEMY OF THE FACE FLY.
J J Drea
J Econ Entom 59(6):1368-1373
Dec 1966 421 JB22
Aleochara tristis, Coleoptera, Musca autumnalis, Musca autumnalis, Parasitic insects, Staphylinidae.

46-67
ELM SPANWORM HEAD CAPSULE WIDTHS AND INSTARS.
A T Drooz
J Econ Entom 58(4):629-631, TABS.
Aug 1965 421 JB22
Empoasca fabae, Empoasca fabae (Harris), Feeding, Photosynthesis, Plant respiration.

47-67
OBSERVATIONS ON THE LIFE HISTORY OF THE LESSOR CORNSTALK BORER.
M Dupree
J Econ Entom 58(6):1156-1157
Dec 1965 421 JB22
Elasmopalpus lignoselius, Life cycle.

48-67
STUDIES ON THE BIONOMICS OF THE JUTE STEM GIRDLER, NUPSERHA BICOLOR POSTBRUNNEA DUTT (COL., CAMIIDAE).
N Dutt
Bull Entomol R 51(4):765-779, TABS.
Jan 1961 421 BB7
Bionomics, Corchorus olitorius, Insect ecology, Jute, Nupserha bicolor postbrunnea Dutt.

49-67
THE ALFALFA WEEVIL PARASITE BATHYPLECTES CURCULIONIS IN ILLINOIS AND NOTES ON ITS DISPERSAL.
R J Dysart B Puttler
J Econ Entom 58(6):1154-1155
Dec 1965 421 JB22
Bathyplectes curculionis, Hypera postica, Hypera postica (Gyllenhal), Illinois, Parasitism.

50-67
THE IMPORTANCE OF TIMING IN ADULT GRASSHOPPER SURVEYS.
R L Edwards
J Econ Entom 55(2):263-264
Apr 1962 421 JB22
Grasshoppers, Insect cultures, Population statistics (insects), Weather.

51-67
A CRITICAL APPRAISAL OF GRASSHOPPER FORECAST MAPS IN SASKATCEWAN, 1936-1958.
R L Edwards
J Econ Entom 55(3):288-292, TABS.
Jun 1962 421 JB22
Eggs, Grasshoppers, Insect survey, Maps, Nymphs.

52-67
THE LIFE HISTORY AND CONTROL OF NEMOCESTES INCOMPTUS (HORN), A NATIVE ROOT WEEVIL ATTACKING STRAWBERRIES IN WESTERN WASHINGTON.
P M Eide
J Econ Entom 59(4):1004-1005
Aug 1966 421 JB22
Nemocestes incomptus (Horn), Root weevil, Strawberries.

53-67
TETRASTICHUS GARRYANA BURKS (HYMENOPTERA: EULOPHIDAE) PARASITE OF AN OAK GALL-WASP, BESBICUS MIRABILIS (KINSEY).
D Evans
Can Entom 95(9):1002-1005
Sep 1963 421 C16
Besbicus mirabilis (Kinsey), Eulophidae, Hymenoptera, Parasites, Tetrastichus garryana Burks.

54-67
OBSERVATIONS OF PUNCTURING AND OVIPOSITION BEHAVIOR OF BOLL WEEVILS.
T R Everett J O Ray
J Econ Entom 57(1):121-123, TABS.
Feb 1964 421 JB22
Anthonomus grandis, Anthonomus grandis, Insect behavior, Oviposition.

55-67
IMMATURE STAGES OF FOUR NEARTIC NOTODONTIDAE (LEPIDOPTERA).
D C Ferguson
Can Entom 95(9):946-953
Sep 1963 421 C16
Larvae, Lepidoptera, Notodontidae, Pupae.

56-67
A BIOLOGICAL AND ECOLOGICAL STUDY OF THE RICE PENTATOMID BUG DEPT. OF AGRICULTURE, PERADENIYA, CEYLON SCOTINOPHARA LURIDA (BURM.) IN.CEYLON.
H E Fernando
Bull Entomol R 51(3):559-576, TABS.
Nov 1960 421 BB7
Ceylon, Insect biology, Insect ecology, Rice, Scotinophara lurida (Burm.).

57-67
THE CAUDAL APPENDAGE OF FINAL-INSTAR LARVAE OF SOME PORIZONTINAE (HYMENOPTERA: ICHNEUMONIDAE).
T Finlayson
Can Entom 96(9):1155-1158
Sep 1964 421 C16
Hymenoptera, Ichneumonidae, Insect anatomy, Larvae, Porizontinae.

58-67
THE PINE ROOT-CELLAR WEEVIL, HYLOBIUS RADICIS BUCH., IN SOUTHERN ONTARIO.
R J Finnegan
Can Entom 94(1):11-17
Jan 1962 421 C16
Hylobius radicis, Hylobius radicis Buch., Life cycle, Pinus, Pinus.

59-67
HYPERPARASITISM, A MUTUALISTIC PHENOMENON.
S E Flanders
Can Entom 95(7):716-720, BIBL. 719-720
Jul 1963 421 C16
Hyperparasitism, Symbiosis.

60-67
THE CIRCUMSTANCES OF SPECIES REPLACEMENT AMONG PARASITIC HYMENOPTRA.
S E Flanders
Can Entom 98(10):1009-1024, BIBL. 1023-1024
Oct 1966 421 C16
Hymenoptera, Insect evolution, Parasitic insects.

I0 6I-67

6I-67
THE BIOLOGY OF THE MOUNTAIN-ASH SAWFLY, PRISTIPHORA GENICULATA (HTG.) (HYMENOPTERA: TENTHREDINIDAE), IN EASTERN CANADA.
R S Forbes L Daviault
Can Entom 96(8):1117-1133, BIBL. 1132-II33, TABS.
Aug 1964 42I CI6
Canada, Hymenoptera, Insect biology, Pristiphora geniculata, Tenthredinidae.

62-67
TWO NEW SPECIES OF CONIFEROUS NEEDLE MINERS FROM LOUISIANA AND THE DESCRIPTION OF A NEW GENUS (LEPIDOPTERA: GELECHIIDAE).
T N Freeman
Can Entom 95(7):727-730
Jul I963 42I CI6
Gelechiidae, Lepidoptera, Louisiana, Miners, Pullcalvaria.

63-67
INFESTATION PATTERNS OF DOUGLAS-FIR BEETLE IN STANDING AND WINDTHROWN TREES IN SOUTHERN IDAHO.
M M Furniss
J Econ Entom 55(4):486-491, TABS.
Aug I962 42I JB22
Dendroctonus pseudotsugae, Dendroctonus pseudotsugae, Population statistics (insects), Trees.

64-67
A METHOD TO DETERMINE PROGRESSIVE MORTALITY DURING SEASONAL DEVELOPMENT OF DOUGLAS-FIR BEETLE BROOD.
M M Furniss
J Econ Entom 57(1):I7B-1B0, PL.
Feb I964 421 JB22
Dendroctonus pseudotsugae, Dendroctonus pseudotsugae, Mortality (insects), Sample designs (insects).

65-67
CONTROL OF FOUR DISEASES OF LABORATORY-REARED BOLL WEEVILS.
R T Gast
J Econ Entom 59(4):793-797, PL.
Aug 1966 421 J822
Anthonomus grandis, Insect diseases, Laboratory-reared insects.

66-67
ADULT BOLL WEEVILS AND EGGS MARKED WITH DYE FED IN LARVAL DIET.
R T Gast M Landin
J Econ Entom 59(2):474-475
Apr I966 421 JB22
Anthonomus grandis, Anthonomus grandis Boheman, Diet, Dyes, Insect eggs, Insect identification, Larvae.

67-67
REGULARITIES IN THE SIZE AND ORIENTATION OF JUNIPER FRAGMENTS ATTACHED TO THE CASES OF THE BAGWORM, THYRIDOPTERYX EPHEMERAEFORMIS (HAW.).
A W Ghent J L Larson
Can Entom 96(8):1097-1106
Aug 1964 421 CI6
Bagworm cases, Juniperus, Thyridopteryx ephemeraeformis (Haw.).

6B-67
THE VARIABILITY OF FLY-ROUND CATCHES IN FIELD STUDY OF GLOSSINA.
J P Glasgow
Bull Entomol R 51(4):7B1
Jan 1960 42I BB7
Field study, Fly-round, Glossina, Glossina swynnertoni.

69-67
INFLUENCE OF MOISTURE ON WINTER SURVIVAL OF THE PINK BOLLWORM.
H M Graham
J Econ Entom 59(2):430-432
Apr I966 421 JB22
Hibernation, Pectinophora gossyplella, Soil molsture.

70-67
INFESTATION OF PINK BOLLWORMS IN OKRA.
H M Graham B C Stephenson
J Econ Entom 59(3):756
Jun I966 421 JB22
Okra, Pectinophora gossyplella, Pectinophora gossyplella.

7I-67
SEASONAL OCCURRENCE OF HELIOTHIS LARVAE ON COTTON IN.
J B Graves D F Clower J L Bagent J R Bradley Jr
J Econ Entom 5B(6):II52-II53
Dec I965 421 JB22
Cotton, Heliothis virescens, Hellothis virescens (F), Hellothis zea, Hellothis zea (Boddie), Louisiana.

72-67
FLIGHT AND DISPERSAL OF THE EUROPEAN SHOOT MOTH, RHYACIONIA BUOLIANA (SCHIFF.) I. FACTORS AFFECTING FLIGHT AND THE FLIGHT POTENTIAL OF FEMALES.
G W Green
Can Entom 94(3):2B2-299
Mar 1962 421 C16
Insect dissemination, Insect flight, Rhyacionia buoliana, Rhyacionia buollana (Schiff.).

73-67
FLIGHT AND DISPERSAL OF THE EUROPEAN PINE SHOOT MOTH, RHYACIONIA BUOLIANA (SCHIFF.) II. NATURAL DISPERSAL OF EGG-LADEN FEMALES.
G W Green P J Pointing
Can Entom 94(3):299-3I4
Mar 1962 42I C16
Insect dissemination, Insect eggs, Insect flight, Rhyacionia buoliana, Rhyacionia buoliana (Schiff.).

74-67
THE LIFE HISTORY AND ECOLOGY OF THE WOOLLY PINE NEEDLE APHID SCHIZOLACHNUS PINI-RADIATAE (DAVIDSON) (HOMOPTERA: APHIDAE).
J H Grobler
Can Entom 94(1):35
11 Jan 1962 421 C16
Aphididae, Homoptera, Insect ecology, Life cycle, Pinus, Pinus, Schizolachnus pini-radiatae (Davidson), Woolly pine needle aphid.

76-67
SOME BEES (APOIDEA) ASSOCIATED WITH PEANUT FLOWERING.
R O Hammonds K V Krombein D B Leuck
J Econ Entom 56(6):905
Dec 1963 421 JB22
Apoldea, Bees, Peanuts.

77-67
SEASONAL AND GEOGRAPHICAL DISTRIBUTION OF TABANIDAE (DIPTERA) IN MANITOBA, BASED ON FEMALES CAPTURED IN TRAPS.
W Hanec G K Bracken
Can Entom 96(10):1362-369
Oct 1964 421 C16
Diptera, Insect ecology, Insect traps, Manitoba, Tabanidae.

78-67
THE MOSQUITOS OF ZARIA PROVINCE, NORTHERN NIGERIA.
P W Hanney
Bull Entomol R 51(1):I45-171
Apr 1960 42I BB7
Anopheles, Culicidae, Nigeria, Zaria province.

79-67
SEQUENTIAL SAMPLING FOR THE IMPORTED CABBAGEWORM, PIERIS RAPAE (L.).
D G Harcourt
Can Entom 9B(7):74I-746
Jul 1966 421 CI6
Pieris rapae, Pieris rapae (L.), Sequential sampling, Statistical analysis.

B0-67
POPULATION DYNAMICS OF LEPTINOTARSA DECEMLINEATA (SAY) IN EASTERN ONTARIO II. POPULATION AND MORTALITY ESTIMATION DURING SIX AGE INTERVALS.
D G Harcourt
Can Entom 96(9):1I90-119B, TABS.
Sep 1964 42I CI6
Demography, Leptinotarsa decemlineata (Say), Ontario.

BI-67
SURVEY OF THE HEMIPTERA AND HOMOPTERA INFESTING GRASSES (GRAMINEAE) IN NEW YORK.
D D Hardee H Y Forsythe Jr G G Gyrisco
J Econ Entom 56(5):555-559, BIBL. 559
Oct 1963 42I JB22
Grasses, Grasses, Hemiptera, Homoptera, New york.

B2-67
A SYNOPSIS OF THE WESTERMANNI GROUP OF THE GENUS EUXOA HBN. (LEPIDOPTERA: NOCTUIDAE) WITH DESCRIPTIONS OF TWO NEW SPECIES.
D F Hardwick
Can Entom 98(7):760-768
Jul 1966 421 CI6
Chimoensis, Euxoa Hbn., Insect taxonomy, Lepidoptera, Luteomaculata, Noctuidae, Westermanni.

B3-67
RELIABILITY OF TRAPPING IN DETERMINING THE EMERGENCE PERIOD AND SEX RATIO OF THE SUGAR-BEET ROOT MAGGOT TETANOPS MYOPAEFORMIS (RODER) (DIPTERA:OTITIDAE).
A M Harper T P Story
Can Entom 94(3):268-271
Mar 1962 42I C16
Diptera, Insect emergence, Insect traps, Otitidae, Tetanops myopaeformis, Tetanops myopaeformis (Roder).

B4-67
DISTRIBUTION OF CYCLODIENE-INSECTICIDE RESISTANCE IN THE SEED MAGGOT COMPLEX IN RELATION TO CROPPING PRACTICES IN SOUTHWESTERN ONTARIO.
C R Harris J L Hitchon G F Manson
J Econ Entom 59(6):1483-1487
Dec 1966 421 JB22
Cyclodiene, Hylemya liturata, Hylemya platura, Insecticide resistant insects, Ontario, Seed maggots.

B5-67
EFFECTS OF THE FALL ENVIRONMENT OF THE BOLL WEEVIL IN NORTHEAST MISSISSIPPI.
F A Harris E P Lloyd D N Baker
J Econ Entom 59(6):1327-1330
Dec 1966 421 JB22
Anthonomus grandis, Anthonomus grandis, Environmental effects, Mississippi.

B6-67
LIFE HISTORY AND HABITS OF A MIDGE, CONTARINIA WASHINGTONENSIS JOHNSON (DIPTERA: CECIDOMYIIDAE), IN DOUGLAS-FIR CONES.
A F Hedlin N E Johnson
Can Entom 95(II):1168-1175, BIBL. 1174-1175
Nov 1963 421 C16
Cecidomyiidae, Cecidomyiidae, Contarinia washingtonensis Johnson, Diptera, Pseudotsuga menziesii.

B7-67
LIFE HISTORY AND HABITS OF A MIDGE, PHYTOPHAGE THUJAE HEDLIN (DIPTERA: CECIDOMYIIDAE) IN WESTERN RED CEDAR.
A F Hedlin
Can Entom 96(7):950-957, TABS.
Jul 1964 421 C16
Cecidomyiidae, Cedrus, Cones, Diptera, Phytophaga thujae Hedlin.

B8-67
OVERWINTERING FEMALES AND THE NUMBER OF GENERATIONS OF TYPHLODROMUS (T.) PYRI SCHEUTEN (ACARINA:PHYTOSEIIDAE) IN NOVA SCOTIA.
H J Herbert
Can Entom 94(3):233-242
Mar 1962 421 C16
Acarina, Hibernation, Life cycle, Nova Scotia, Phytoseiidae, Predaceous insects, Typhlodromus (T.) pyri Scheuten.

89-67
NOCTURNAL RESTING PLACES OF THE SCREW-WORM FLY.
B G Hightower
J Econ Entom 56(4):498-500, TABS.
Aug 1963 421 JB22
Cochliomyia hominivorax, Cochliomyia hominivorax (Coquerel), Insect ecology.

90-67
LOCAL DISTRIBUTION OF RELEASED LABORATORY-REARED SCREW-WORM FLIES IN RELATION TO WATER SOURCES.
B G Hightower D A Alley
J Econ Entom 56(6):798-802, TABS.
Dec 1963 421 JB22
Cochliomyia hominivorax, Cochliomyia hominivorax (Coquerel), Insect dissemination, Insect rearing, Ponds, Streams.

91-67
SEASONAL ABUNDANCE OF THE SCREW-WORM IN NORTHERN MEXICO.
B G Hightower R B Davis A H Baumhover O H Graham
J Econ Entom 59(2):416-420
Apr 1966 421 JB22
Cochliomyia hominivorax, Cochliomyia hominovorax (Coquerel), Environment, Weather.

92-67
ECOLOGY OF SPECIES OF BOMBUS LATR. (HYMENOPTERA: APIDAE) IN SOUTHERN ALBERTA. I. SUBGENUS ALPINOBOMBUS SKOR.
G A Hobbs
Can Entom 96(11):1465-1470
Nov 1964 421 C16
Alberta, Alpinobombus Skor., Apidae, Bombus Latr., Hymenoptera, Insect ecology.

93-67
EFFECT OF PRE-EMERGENCE RAINFALL ON POPULATION SIZE IN THE TOBACCO HORNWORM.
J R Holman E W King
J Econ Entom 59(5):1199-1200
Oct 1966 421 JB22
Insect population, Manduca quinquemaculata, Manduca sexta (Johannson), Rainfall.

94-67
THE NORTH AMERICAN SPECIES IN GROUPS IV AND V OF IPS DE GEER (COLEOPTERA: SCOLYTIDAE).
G R Hopping
Can Entom 96(7):970-979
Jul 1964 42I C16
Coleoptera, Ips, Ips avulsus, Ips bonanseai, Ips perroti Swaine, Ips pini, Scolytidae.

95-67
THE NORTH AMERICA SPECIES IN GROUP I OF IPS DE GEER (COLEOPTERA: SCOLYTIDAE).
G R Hopping
Can Entom 95(10):1091-1096
Oct 1963 42I C16
Coleoptera, Ips concinnus (Mannerheim), Ips mexicanus (Hopkins), Ips DeGeer, Scolytidae.

96-67
THE SEX RATIOS IN IPS TRIDEN MANNERHEIM (COLEOPTERA: SCOLYTIDAE).
G R Hopping
Can Entom 94(5):506
May 1962 421 C16
Coleoptera, Insect genetics, Ips tridens Mannerheim, Scolytidae, Sex ratios.

97-67
THE NORTH AMERICAN SPECIES IN GROUP II AND III OF IPS DE GEER (COLEOPTERA: SCOLYTIDAE).
G R Hopping
Can Entom 95(II):1202-1210
Nov 1963 421 C16
Coleoptera, Insect taxonomy, Ips emarginatus (Leconte), Ips knausi Swaine, Ips plastographus (Leconte), Ips De Geer, Scolytidae.

98-67
EUROPEAN CORN BORER IN PEACHES.
W S Hough
J Econ Entom 57(2):300-301, PL.
Apr 1964 421 JB22
Ostrinia nubilalis, Ostrinia nubilalis, Peaches.

99-67
NOTES ON CANTHONINI OF THE BIOLOGIA CENTRALI-AMERICANA AND DESCRIPTIONS OF NEW SPECIES (COLEOPTERA: SCARABAEIDAE).
H F Howden
Can Entom 98(7):725-741
Jul 1966 42I CI6
Biologia Centrali-Americana, Canthon, Canthonini, Central America, Coleoptera, Deltochilum, Insect taxonomy, Megathopa, Scarabaeidae.

100-67
POTENTIAL OF BIOLOGICAL CONTROL OF TWO-SPOTTED SPIDER MITES ON STRAWBERRIES IN CALIFORNIA.
C B Huffaker D L Flaherty
J Econ Entom 59(4):786-792, BIBL., TABS.
Aug 1966 421 JB22
Biological control, California, Strawberries, Tetranychus urticae.

10 101-67

101-67
OCCURRENCE OF ASIATIC OAK WEEVIL IN ALFALFA AND RED CLOVER IN MARYLAND.
J L Huggans
J Econ Entom 56(4):531
Aug 1963 421 J822
Alfalfa, Cyrtepistomus castaneus,
Cyrtepistomus castaneus (Roelofs), Maryland, Red clover.

102-67
POPULATION AND MORTALITY ASSESSMENT DURING THE EGG AND LARVAL STAGES OF THE LARCH SAWFLY, PRISTIPHORA ERICHSONII (HGT.).
G H Ives
Can Entom 94(3):256-268, BIBL. 267-268
Mar 1962 421 C16
Insect eggs, Insect populations, Larvae,
Pristiphora erichsonii, Pristiphora erichsonii (Htg.).

103-67
EFFECTS OF DEFOLIATION ON SURVIVAL OF LARVAE OF THE LARCH SAWFLY PRISITIPHORA ERICHSONII (HTG.).
W G H Ives
Can Entom 95(8):887-892
Aug 1963 421 C16
Defoliation, Larvae, Pristiphora erichsonii.

104-67
EFFECTS OF WATER LEVELS ON THE OVERWINTERING SURVIVAL AND EMERGENCE OF THE LARCH SAWFLY IN A BOG HABITAT.
W G H Ives L D Nairn
Can Entom 98(7):768-777, TABS.
Jul 1966 421 C16
Aquatic insects, Bogs, Hibernation, Pristiphora erichsonii,
Pristiphora erichsonii, Water table.

105-67
LARVAL HABITATS, DEVELOPMENT, AND PARASITES OF SOME TABANIDAE (DIPTERA) IN SOUTHERN ONTARIO.
H G James
Can Entom 95(11):1223-1232
Nov 1963 421 C16
Diptera, Habitats, Insect morphology, Larvae, Ontario,
Parasites, Tabanidae.

106-67
INSECTS AND SPIDERS FROM GOLDENROD GALLS OF GNORIMOSCHEMA GALLAESOLIDAGINIS RILEY (GELECHIIDAE).
W W Judd
Can Entom 96(7):987-991
Jul 1964 421 C16
Gelechiidae, Gnorimoschema gallaesolidaginis, Insects,
Plant galls, Solidago, Spiders.

107-67
INSECTS AND OTHER INVERTEBRATES FROM NESTS OF THE CARDINAL, RICHMONDENA CARDINALIS (L.), AT LONDON, ONTARIO.
W W Judd
Can Entom 94(1):92-95
Jan 1962 421 C16
Bird nests, Cardinal, Insect taxonomy, Insects,
Richmondena cardinalis (L.).

108-67
INSECTS ASSOCIATED WITH FLOWERING MARSH MARIGOLD, CALTHA PALUSTRIS L., AT LONDON, ONTARIO.
W W Judd
Can Entom 96(11):1472-1476
Nov 1964 421 C16
Caltha palustris, Insects, Ontario.

110-67
THE BIOLOGY AND ECOLOGY OF THE RED-PINE NEEDLE MIDGE AND ITS ROLE IN FALL BROWNING OF RED PINE FOLIAGE.
W H Kearby D M Benjamin
Can Entom 96(10):1313-1322
Oct 1964 421 C16
Browning, Pinus, Thecodiplosis piniresinosae.

111-67
THELOHANIA CALIFORNICA N. SP., A MICROSPORIDIAN PARASITE OF CULEX TARSALIS COQUILLETT.
W R Kellen J J Lipa
J Invertebrate Path 2(1):1-12
1960 421 J826
Culex tarsalis Coquillett, Microsporidia, Nosematidae,
Thelohania californica.

112-67
REVISION OF THE GENUS REUTEROSCOPUS KIRKALDY 1905 WITH DESCRIPTION OF ELEVEN NEW SPECIES (HEMIPTERA: MIRIDAE).
L A Kelton
Can Entom 96(11):1421-1433
Nov 1964 421 C16
Hemiptera, Miridae, Reuteroscopus.

113-67
THE FORMS OF SYNTOMOSPHYRUM (HYM., EULOPHIDAE) PARASITIC ON TSETSE FLIES.
G J Kerrich
Bull Entomol R 51(1):21-23
Apr 1960 421 B87
Glossina spp., Syntomosphyrum.

114-67
THE FLIGHT OF CULICOIDES IMPUNCTATUS GOETGHEBUER (DIPTERA, CERATOPOGONIDAE) OVER MOORLAND AND ITS BEARING ON MIDGE CONTROL.
D S Kettle
Bull Entomol R 51(3):461-489
Nov 1960 421 B87
Ceratopogonidae, Culicoides impunctatus Goetghebuer,
Diptera, Flight range, Moorland.

115-67
THE PYRGOMORPHIDAE (ORTHOPTERA: ACRIDOIDEA) : THEIR SYSTEMATICS, TRIBAL DIVISIONS AND DISTRIBUTION.
D K M Kevan S S Akbar
Can Entom 96(12):1505-1536, BIBL. 1534-1535
Dec 1964 421 C16
Acridoidea, Orthoptera, Pyrgomorphidae.

116-67
QUANTITATION OF EFFECT OF SEVERAL STIMULI ON THE APPROACH OF AEDES AEGYPTI.
A A Khan H I Maibach W G Strauss W R Fenley
J Econ Entom 59(3):690-696
Jun 1966 421 J822
Aedes aegypti, Approach, Stimuli.

117-67
FURTHER NOTES ON THE GENUS EVYLAEUS ROBERTSON (HYMENOPTERA: HALICITIDAE).
G Knerer C E Atwood
Can Entom 96(7):957-962
Jul 1964 421 C16
Evylaeus Robertson, Halictidae, Hymenoptera.

118-67
PHAENOPRIA POPEI (HYMENOPTERA: DIAPRIIDAE) REARED FROM PUPARIA OF SCIOMYZID FLIES.
L V Knutson C O Berg
Can Entom 95(7):724-726
Jul 1963 421 C16
Diapriidae, Hymenoptera, Phaenopria popei, Sciomyzidae.

119-67
STUDIES ON THE FEEDING BEHAVIOR OF ALFALFA WEEVIL ADULTS FROM THE EASTERN AND WESTERN UNITED STATES.
C S Koehler G G Gyrisco
J Econ Entom 56(4):489-492, TABS.
Aug 1963 421 J822
Eastern United States, Hypera postica,
Hypera postica (Gyllenhal), Insect behavior,
Insect nutrition, Western United States.

120-67
PERIPLOCA NIGRA, A MAJOR CAUSE OF DIEBACK OF ORNAMENTAL JUNIPER IN CALIFORNIA.
C S Koehler M Tauber
J Econ Entom 57(4):563-566, TABS.
Aug 1964 421 J822
California, Dieback (ornamental juniper), Juniperus,
Periploca nigra (Hodges).

121-67
SERIOUS INCREASE OF COTTON WHITEFLY AND VIRUS TRANSMISSION IN CENTRAL AMERICA.
P Kraemer
J Econ Entom 59(6):1531
Dec 1966 421 J822
Bemisia tabaci, Central america, Cotton whitefly,
Leaf curl (cotton).

122-67
EMERGENCE AND FLIGHT OF CLICK BEETLES (COLEOPTERA: ELATERIDAE) IN ORGANIC SOILS OF SOUTHWESTERN QUEBEC.
J Lafrance

Can Entom 95(8):873-878
Aug 1963 421 C16
Coleoptera, Elateridae, Insect emergence, Insect flight, Quebec, Soils.

123-67
THE 8IOLOGY OF TWO SPECIES OF MOSQUITO, MANSONIA AFRICANA (THEO8ALD) AND MANSONIA UNIFORMIS (THEO8ALD), 8ELONGING TO THE SU8GENUS MANSONIOIDES (DIPTERA, CULICIDAE).
8 R Laurence
8ull Entomol R 51(3):491-517, 8I8L.513-517
Nov 1960 421 887
Culicidae, Diptera, Insect biology, Mansonia africana (Theobald), Mansonia uniformis (theobald).

124-67
PUPATION SITES OF THE EYE-SPOTTED 8UD MOTH, SPILONOTA OCELLANA AND DIFFERENCES IN DEGREE OF DEVELOPMENT ON TWO APPLE VARIETIES IN WISCONSIN.
E F Legner E R Oatman
J Econ Entom 56(5):689-690
Oct 1963 421 J822
Apples, Insect ecology, Spilonata ocellana, Spilonota ocellana, Wisconsin.

125-67
SPIDERS ON APPLE IN WISCONSIN AND THEIR A8UNDANCE IN A NATURAL AND TWO ARTIFICIAL ENVIROMENTS.
E F Legner E R Oatman
Can Entom 96(9):1202-1207, TA8S.
Sep 1964 421 C16
Apples, Spiders, Wisconsin.

126-67
8IOLOGY OF THE LESSER CORNSTALK 8ORER IN SOUTH GEORGIA.
D 8 Leuck
J Econ Entom 59(4):797-801, TA8S.
Aug 1966 421 J822
8iology, Elasmopalpus lignosellus, Elasmopalpus lignosellus, Georgia.

127-67
8IOLOGICAL RELATIONSHIPS 8ETWEEN CARDIOCHILES NIGRICEPS AN0 THE HELIOTHIS COMPLEX.
W J Lewis J R 8razzel
J Econ Entom 59(4):820-823, TA8S.
Aug 1966 421 J822
Cardiochiles nigriceps, Heliothis viscerens, Heliothis zea, Parasitic insects.

128-67
A TAXONOMIC REVIEW OF THE GENUS HOPLOSEIUS 8ERLESE (ACARINA: 8LATTISOCIDAE).
E F Lindquist
Can Entom 95(11):1175-1185
Nov 1963 421 C16
Acarina, 8lattisocidae, Hoploseius 8erlese, Insect taxonomy.

129-67
A FIELD STUDY OF DIAPAUSE, DIAPAUSE CONTROL, AND POPULATION DYNAMICS OF THE 8OLL WEEVIL.
E P Lloyd M L Laster M E Merki
J Econ Entom 57(4):433-436
Aug 1964 421 J822
Anthonomus grandis, Anthonomus grandis, Diapause, Insect demography.

130-67
PARASITISM OF THE DOGWOOD FLEA-8EETLE, ALTICA CORNI, IN ONTARIO.
C C Loan
J Econ Entom 56(4):537-538
Aug 1963 421 J822
Altica corni Woods, Dogwood flea-beetle, Ontario, Parasitic insects.

132-67
THE EFFECT OF AGGREGATION ON EGG AND LARVAL SURVIVAL IN NEODIPRION SWAINEI MIDD. (HYMENOPTERA: DIPRIONIDAE).
L A Lyons
Can Entom 94(1):49-58
Jan 1962 421 C16
Diprionidae, Hymenoptera, Insect eggs, Larvae, Neodiprion swainei Midd..

133-67
THE SPATIAL DISTRI8UTION OF TWO PINE SAWFLIES AND METHODS OF SAMPLING FOR THE STUDY OF POPULATION DYNAMICS.
L A Lyons
Can Entom 96(11):1373-1407, 8IBL. 1406-1407, TA8S.
Nov 1964 421 C16
Demography, Neodiprion sertifer, Neodiprion swainei, Sampling (statistics).

134-67
A RE-EXAMINATION OF C. F. 8AKER S COLLECTION OF APHID PARASITES (HYMENOPTERA: APHIDIIDAE).
M J P Mackauer
Can Entom 95(9):921-935, 8I8L. 935
Sep 1963 421 C16
Aphidiidae, Hymenoptera, Parasites.

135-67
HOUSE FLY 8REEDING IN OAK SAWDUST AND PEANUT HULLS USED AS 8EDDING IN CALF PENS.
D MacCreary G F W Haenlein
J Econ Entom 55(3):419
Jun 1962 421 J822
8edding (livestock), 8reeding, Musca domestica, Musca domesticus, Peanuts, Quercus, Quercus, Sawdust.

136-67
FLIGHT RANGE O8SERVATIONS ON LYGUS LINEOLARIUS AND CERTAIN OTHER HEMIPTERA.
D MacCreary
J Econ Entom 58(5):1004-1005
Oct 1965 421 J822
Flight range, Hemiptera, Lygus lineolarius.

137-67
A NEW SU8GENUS AND SPECIES OF FULLAWAYA ESSIG (HOMOPTERA, APHIDIDAE) FROM POPULUS TREMULOIDES MICHX.
M E MacGillivray
Can Entom 95(9):941-946
Sep 1963 421 C16
Aphididae, Fullawaya Essig, Homoptera, Populus tremuloides Michx..

138-67
EVOLUTION AND ADAPTATION OF LARVAL CHARACTERS IN THE TORTRICIDAE.
M R MacKay
Can Entom 95(12):1321-1344, 8I8L. 1343-1344
Dec 1963 421 C16
Insect adaptation, Insect evolution, Larvae, Tortricidae.

139-67
PRO8LEMS IN NAMING THE SETAE OF LEPIDOPTEROUS LARVAE.
M R MacKay
Can Entom 95(9):996-999
Sep 1963 421 C16
Hair, Larvae, Lepidoptera.

140-67
O8SERVATIONS ON THE NATURAL CONTROL OF THE PEAR PSYLLA, PSYLLA PYRICOLA FORSTER, IN CALIFORNIA.
H F Madsen P H Westigard R L Sisson
Can Entom 95(8):837-844
Aug 1963 421 C16
California, Natural control (insects), Psylla pyricola, Psylla pyricola Forster.

141-67
HOLOCYCLIC STRAIN OF THE SPOTTED ALFALFA APHID IN NE8RASKA AND ADJACENT STATES.
G R Manglitz C O Calkins R J Walstrom S D Hintz S D Kindler
J Econ Entom 59(3):636-639
Jun 1966 421 J822
Holocyclic insects, Nebraska, Therioaphis maculata, Therioaphis maculata.

142-67
THE INSECT ECOLOGY OF RED PINE PLANTATIONS IN CENTRAL ONTARIO. II. LIFE HISTORY AND CONTROL OF CURCULIONIDAE.
J L Martin
Can Entom 96(11):1408-1417
Nov 1964 421 C16
Curculionidae, Insect ecology, Ontario, Pinus.

143-67
THE GENUS CHRYSOPOPHTHORUS GOIDANICH (HYMENOPTERA : 8RACONIDAE).
W R Mason
Can Entom 96(7):1005-1017
Jul 1964 421 C16
8raconidae, Chrysopophthorus Goidanich, Hymenoptera.

10 144-67

144-67
A REVISION OF THE GENUS CAMPICHOETA MACQUART (DIPTERA: DIASTATIDAE).
V F McAlpine
Can Entom 94(1):1-10
Jan 1962 42I CI6
Campicholta Macquart, Diastatidae, Diptera,
Insect morphology, Insect taxonomy.

145-67
CONTINUOUS REARING OF THE CARROT RUST FLY, PSILA ROSAE (FAB.).
R J McClanahan H D Niemczyk
Can Entom 95(8):827-830
Aug 1963 421 C16
Insect rearing, Psila rosae, Psila rosae.

146-67
A METHOD OF REARING LARVAE OF THE WHEAT STEM SAWFLY CEPHUS CINCTUS NORT. (HYMENOPTERA: CEPHIDAE), UNDER ARTIFICIAL CONDITIONS.
A J McGinnis R Kasting
Can Entom 94(6):573-574
Jun 1964 421 C16
Cephidae, Cephus cinctus, Cephus cinctus Nort., Hymenoptera,
Insect rearing, Larvae.

147-67
THE IMMATURE STAGES OF THE CANADIAN SPECIES OF PERO HERRICH-SCHAEFFER (LEPIDOPTERA: GEOMETRIDAE).
W C McGuffin
Can Entom 95(11):1159-1167
Nov 1963 42I CI6
Geometridae, Lepidoptera, Pero Herrich-Schaeffer.

148-67
THE LIFE HISTORY AND HABITS OF SCOLYTUS UNISPINOSUS LECONTE (COLEOPTERA: SCOLYTIDAE) IN THE INTERIOR OF BRITISH COLUMBIA.
L H McMullen M D Atkins
Can Entom 94(1):17.25
Jan 1962 421 C16
Coleoptera, Douglas-fir engraver, Insect behavior,
Life cycle, Pseudotsuga menziesii (Mirb) Franco, Scolytidae,
Scolytus unispinosus Leconte.

149-67
ANTHOPHORA (CLISODON) TERMINALIS CRESSON IN TRAP-NESTS IN WISCONSIN (HYMENOPTERA: ANTHOPHORIDAE).
J T Medler
Can Entom 96(10):1332-1336
Oct 1964 421 C16
Anthophora terminalis Cresson, Anthophoridae, Hymenoptera,
Insect traps, Wisconsin.

150-67
LIFE-HISTORY STUDIES AND REARING TECHNIQUES FOR THE THREE-CORNERED ALFALFA HOPPER.
M V Meisch N M Randolph
J Econ Entom 58(6):1058-1059
Dec 1965 421 JB22
Insect rearing, Life cycle, Spissistilus festinus,
Spissistilus festinus (Say).

151-67
A NEW SPECIES OF GROTIUSOMYIA GIRAULT (HYMENOPTERA: EULOPHIDAE).
C D F Miller
Can Entom 96(7):1021-1023
Jul 1964 421 C16
Eulophidae, Grotiusomyia Girault, Hymenoptera.

152-67
THE EUROPEAN PRAYING MANTIS (MANTIS RELIGIOSA L.) AS A PREDATOR OF THE RED-LEGGED GRASSHOPPER (MELANOPLUS FEMURRUBRUM) (DE GEER).
L J Mook D M Davies
Can Entom 98(9):913-918, TABS.
Sep 1966 42I CI6
Insect behavior, Mantis religiosa L,
Melanoplus ferrubrum (De Geer), Predaceous insects.

153-67
OCCURRENCE OF THE EGG PARASITE CLOSTEROCERUS CINCTIPENNIS IN VIRGINIA.
C L Morris W J Schroeder
J Econ Entom 59(6):1533-1534
Dec 1966 421 J822
Closterocerus cinctipennis, Eggs, Predaceous insects,
Virginia.

154-67
SYNONYMY AND COLOR VARIATION IN THE FALL WEBWORM, HYPHANTRIA CUNEA DRURY (LEPIDOPTERA : ARCTIIDAE).
R F Morris
Can Entom 95(11):1217-1223
Nov 1963 42I CI6
Arctiidae, Color, Hyphantria cunea, Hyphantria cunea Drury,
Hyphantria textor Harris, Lepidoptera.

155-67
NOTE ON THE OCCURRENCE OF ANACAMPSIS POPULELLA (CLERCK) (LEPIDOPTERA: GELECHIIDAE) IN CANADA.
R F Morris
Can Entom 98(9):1003-1004
Sep 1966 421 CI6
Anacampsis populella (Clerck), Canada, Gelechiidae,
Insect outbreaks, Lepidoptera.

156-67
THE EFFECT OF PREDATOR AGE AND PREY DEFENSE ON THE FUNCTIONAL RESPONSE OF PODISUS MACULIVENTRIS SAY TO THE DENSITY OF HYPHANTRIA CUNEA DRURY.
R F Morris
Can Entom 95(10):1009-1020
Oct 1963 421 C16
Hyphantria cunea, Hyphantria cunea Drury, Pentatomidae,
Podisus maculiventris, Predaceous insects.

157-67
A NEW SPECIES OF TETRALOPHA (LEPIDOPTERA: PYRALIDAE) FROM VACCINIUM.
E Munroe
Can Entom 95(7):677-679
Jul 1963 421 CI6
Lepidoptera, Pyralidae, Tetralopha vaccinilvora.

158-67
HISTORY OF LARCH SAWFLY OUTBREAKS AND THEIR EFFECT ON TAMARACK STANDS IN MANITOBA AND SASKATCHEWAN.
L D Nairn W A Reeks F E Webb V Hildahl
Can Entom 94(3):242-255, BIBL. 254-255
Mar 1962 42I C16
Insect ecology, Insect outbreaks, Larix laricina,
Larix laricina, Pristiphora erichsonii,
Pristiphora erichsonii (Htg.).

159-67
A LIST OF TRICHOPTERA TAKEN AT MONTREAL AND CHAMBLY, QUEBEC, WITH DESCRIPTIONS OF THREE NEW SPECIES.
A P Nimmo
Can Entom 98(7):688-693
Jul 1966 42I C16
Aquatic insects, Cheumatopsyche montrealensis,
Hydropsyche corbeti, Protoptila expositionis, Quebec,
Trichoptera.

160-67
METHODS FOR DETERMINING PINK BOLLWORM POPULATIONS IN BLOOMS.
L W Noble O T Robertson
J Econ Entom 57(4):501-503
Aug 1964 421 JB22
Cotton, Insect populations, Pectinophora gossypiella,
Pectinophora gossypiella.

161-67
A STUDY OF THE KHAPRA BEETLE, TROGODERMA GRANARIUM, IN COMMERCIAL GRAIN STORAGES IN SOUTHERN ARIZONA.
W L Nutting P D Gerhardt
J Econ Entom 57(3):305-314, TABS.
Jun 1964 421 J822
Arizona, Storage, Trogoderma granarium,
Trogoderma granarium.

162-67
THE TAENIOTHRIPS OF CANADA (THYSANOPTERA: THRIPIDAE).
K O Nell R S Bigelow
Can Entom 96(9):1219-1239, BIBL. 1238-1239
Sep 1964 421 C16
Canada, Taeniothrips, Thripidae, Thysanoptera.

163-67
BIONOMICS OF THE DESTRUCTIVE PRUNE WORM, MINEOLA SCITULELLA, ON SOUR CHERRY IN WISCONSIN.
E R Oatman
J Econ Entom 57(1):100-102, PL.
Feb 1964 42I JB22
Destructive prune worm, Insect ecology, Mineola scitulella,
Sour cherries, Wisconsin.

164-67
ORCHARD INSECT SURVEYS WITH BLACKLIGHT TRAPS.
E R Oatman
J Econ Entom 57(1):6-8
Feb 1964 421 J822
Insect ecology, Light traps, Orchards.

165-67
AN ECOLOGICAL STUDY OF ARTHROPOD POPULATIONS ON APPLE IN NORTHEASTERN WISCONSIN: SPECIES AFFECTING THE FRUIT.
E R Oatman E F Legner R F Brooks
J Econ Entom 59(1):165-169
Feb 1966 421 JB22
Apples, Argyrotaenia velutinana (Walker), Arthropoda, Carpocapsa pomonella (L.), Conotrachelus nenuphar (Herbst), Ecology, Fruit, Insect population, Ragoletis pomonella Walsh, Spilonota ocellana (Denis and Schiffermuller), Venturia inequalis (Winters), Wisconsin.

166-67
ADDITIONAL STUDIES ON THE BIONOMICS OF THE EYE-SPOTTED BUD MOTH, SPILONOTA OCELLANA, ON SOUR CHERRY IN WISCONSIN.
E R Oatman
J Econ Entom 56(6):903-904
Dec 1963 421 JB22
Insect ecology, Sour cherries, Spilonota ocellana, Spilonota ocellana, Wisconsin.

167-67
GREATER WAX MOTH DEVELOPS ON BUMBLE BEE CELLS.
E Oertel
J Econ Entom 56(4):543-544
Aug 1963 421 J822
Bee combs, Bombus, Bombus, Galleria mellonella, Galleria mellonella (L.).

168-67
STUDIES ON THE BIOLOGICAL CONTROL OF THE FALL WEBWORM, HYPHANTRIA CUNEA, IN LOUISIANA.
A D Oliver
J Econ Entom 57(3):314-318, TABS.
Jun 1964 421 J822
Biological control (insects), Hyphantria cunea, Hyphantria cunea, Louisiana.

169-67
METHODS OF SEXING AND SEX RATIOS OF THE SOUTHERN PINE BEETLE, DENDROCTONUS FRONTALIS ZIMM.
E A Osgood Jr E W Clark
Can Entom 95(10):1106-1109
Oct 1963 421 C16
Dendroctonus frontalis, Dendroctonus frontalis Zimm., Sex determination.

170-67
A SAMPLING TECHNIQUE FOR POPULATION AND MORTALITY FACTORS OF THE FRUIT-TREE LEAF ROLLER, ARCHIPS ARGYROSPILUS (WLK.) (LEPIDOPTERA: TORTRICIDAE), ON APPLES IN QUEBEC.
R O Paradis E J LeRoux
Can Entom 94(6):561-573, BIBL. 572-573
Jun 1962 421 C16
Archips argyrospilus, Archips argyrospilus (Wlk.), Insect ecology, Insect mortality, Insect population, Sampling.

171-67
FIRST FINDINGS OF COTTON LEAFWORM LARVAE IN THE UNITED STATES, 1922 TO 1963.
C R Parencia Jr C F Rainwater
J Econ Entom 57(4):432, BIBL.
Aug 1964 421 J822
Alabama argillacea, Alabama argillacea, Larvae, United States.

172-67
STUDIES ON THE ABILITY OF OVERWINTERED BOLL WEEVILS TO FIND FRUITING COTTON PLANTS.
C R Parencia Jr J W Davis C B Cowan Jr
J Econ Entom 57(1):162
Feb 1964 421 JB22
Anthonomus grandis, Anthonomus grandis, Cotton, Hibernation.

173-67
A LIST OF THE TABANIDAE (DIPTERA) OF QUEBEC.
L L Pechuman
Can Entom 96(12):1495-1496
Dec 1964 421 C16
Diptera, Quebec, Tabanidae.

174-67
DESCRIPTION OF THE IMMATURE STAGES OF PULVINARIA VITIS (L) AND P. INNUMERABILIS (RATHVON) (HOMOPTERA: COCCOIDEA), WITH NOTES ON THE HABITS OF THESE SPECIES IN ONTARIO, CANADA.
J H H Phillips
Can Entom 94(5):497-502
May 1962 421 C16
Coccoidea, Homoptera, Insect morphology, Pulvinaria innumerabilis (Rathvon), Pulvinaria vitis (L.).

176-67
POTATO LEAFHOPPER TRAPPING STUDIES TO DETERMINE LOCAL FLIGHT ACTIVITY.
R L Pienkowski J T Medler
J Econ Entom 59(4):837-843
Aug 1966 421 J822
Empoasca fabae, Flight activity, Light traps.

177-67
INTRODUCING PARASITES AND PREDATORS TO CONTROL NATIVE PESTS.
D Pimentel
Can Entom 95(8):785-792, BIBL. 791-792
Aug 1963 421 C16
Insect pests, Parasites, Predaceous insects.

178-67
HYMENOPTEROUS PARASITES OF THE ALFALFA WEEVIL, HYPERA POSTICA, IN NEW YORK.
G O Poinar Jr G G Gyrisco
J Econ Entom 56(4):533-534, BIBL. 534
Aug 1963 421 JB22
Hymenoptera, Hypera postica, Hypera postica (Gyllenhal), New York, Parasitic insects.

179-67
A COMPARISON OF TWO SAMPLING METHODS FOR ESTIMATING POPULATION TRENDS OF THRIPS AND MITES ON POTATOES.
D M Powell B J Landis
J Econ Entom 58(6):1141-1144
Dec 1965 421 JB22
Potatoes, Sampling, Tetranychus telarius (L), Tetranychus urticae, Thrips tabaci, Thrips tabaci Lindeman.

180-67
SPECIES OF COLPOCEPHALUM (MALLOPHAGA: MENOPONIDAE) PARASITIC UPON THE FALCONIFORMES.
R D Price J R Beer
Can Entom 95(7):731-763
Jul 1963 421 C16
Colpocephalum, Falconiformes, Mallophaga, Menoponidae.

181-67
A NEW COLPOCEPHALUM (MALLOPHAGA: MENOPONIDAE) FROM DAPTRIUS ATER.
R D Price J R Beer
Can Entom 96(11):1483-1484
Nov 1964 421 C16
Colpocephalum, Daptrius ater, Mallophaga, Menoponidae.

182-67
BIOLOGICAL NOTES ON SOME HYPERPARASITES OF BATHYPLECTES CURCULIONIS (THOMSON).
B Puttler
J Econ Entom 59(2):483-484, BIBL.
Apr 1960 421 JB22
Bathyplectes curculionis (Thomson), Hypera postica, Hypera postica (Gylienhal), Hyperparasitism.

183-67
SOME SEXUAL DIFFERENCES IN THE GRANARY WEEVIL SITOPHILUS GRANARIUS (L.).
A H Qureshi
Can Entom 95(10):1117-1119
Oct 1963 421 C16
Insect morphology, Sex behavior, Sitophilus granarius, Sitophilus granarius (L.).

184-67
THE MALE GENITALIA IN GRYLLINAE (ORTHOPTERA: GRYLLIDAE) AND A TRIBAL REVISION.
R L Randell
Can Entom 96(12):1565-1607, BIBL. 1602-1607
Dec 1965 421 C16
Gryllidae, Gryllinae, Orthoptera, Reproductive organs.

185-67
FURTHER STUDIES ON TECHNIQUES FOR SAMPLING THE DENSITY OF AFRICAN HOUSE FLY POPULATIONS. 1. A FIELD COMPARISON OF TH USE OF THE SCUDDER GRILL AND THE STICKY-FLYTRAP METHOD FOR

10 186-67

SAMPLING THE INDOOR DENSITY OF AFRICAN HOUSE FLIES.
J N Raybould
J Econ Entom 59(3):639-644
Jun 1966 421 J822
Africa, Fly traps, Insect population density,
Musca domestica, Musca domestica calleva Walker,
Musca domestica curviforceps Rivosecchi,
Musca domestica curviforceps Sacca.

186-67
THE OCCURENCE AND LIFE HISTORY OF THE LEAF TIER, CNEPHASIA VIRGAUREANA TREIT. (LEPIDOPTERA: TORTRICIDAE), AND ITS PARASITES IN NEWFOUNDLAND AND PRINCE EDWARD ISLAND.
D C Read R F Morris
Can Entom 96(10):1336-1339
Oct 1964 421 C16
Cnephasia virgaureana Treit., Lepidoptera, Newfoundland,
Prince Edward Island, Tortricidae.

187-67
ESTA8LISHING AND MAINTAINING A CULTURE OF HYLEMIA 8RASSICAE (8OUCHE) DIPTERA:ANTHOMYIIDAE) IN THE GREENHOUSE OR LA8-ORATORY.
D C Read H E Welch
Can Entom 94(5):458-460
May 1962 421 C16
Anthomyiidae, Diptera, Greenhouse culture,
Hylemya brassicae, Hylemya brassicae (8ouche),
Insect rearing.

188-67
8IONOMICS OF THE 8ARK 8EETLE PSEUDOPITYOPHTHORUS PRUINOSUS WITH SPECIAL REFERENCE TO ITS ROLE AS A VECTOR OF OAK WILT, CERATOCYSTIS FAGACEARUM.
C O Rexrode H M Kulman C K Dorsey
J Econ Entom 58(5):913-916
Oct 1965 421 J822
Ceratocystis fagacearum, Ecology,
Pseudopityophthorus pruinosus, Quercus, Scolytidae,
Wilt (oak).

189-67
A NEW ARTIC APHID (HOMOPTERA: APHIDIDAE).
W R Richards
Can Entom 96(7):1027-1029
Jul 1964 421 C16
Aphididae, Arctic, Homoptera, Metapoiophium.

190-67
THREE NEW NORTH AMERICAN POPLAR-INFESTING CHAITOPHORINAE (HOMOPTERA: APHIDIDAE).
W R Richards
Can Entom 98(10):1104-1111
Oct 1966 421 C16
Aphididae, Chaitophorinae, Chaitophorus noduiosus,
Chaitophorus nudus, Homoptera, North America, Populus,
Pseudopterocomma canadensis.

191-67
THE MYZAPHIDINES OF CANADA (HOMOPTERA: APHIDIDAE).
W R Richards
Can Entom 95(7):680-704, 8I8L. 703-704
Jul 1963 421 C16
Aphididae, Canada, Homoptera, Myzaphidines.

192-67
THE SCALE INSECTS OF THE CANADIAN ARTIC (HOMOPTERA: COC-COIDEA).
W R Richards
Can Entom 96(11):1457-1462
Nov 1964 421 C16
Arctic, Coccoidea, Homoptera.

193-67
SURVEYS OF ADULT GRASSHOPPERS IN SASKATCHEWAN IN RELATION TO SEASONAL DEVELOPMENT.
P W Riegert R Pickford
Can Entom 95(9):936-941
Sep 1963 421 C16
Grasshoppers, Saskatchewan.

194-67
MASS REARING OF THE WESTERN SPOTTED CUCUM8ER 8EETLE.
L C Rimando R A Corey Y Sun
J Econ Entom 59(1):230-231
Feb 1966 421 J822
Diabrotica undecimpunctata howardi,
Diabrotica undecimpunctata Mannerheim,
Diabrotica virgifera LeConte, Insect rearing.

195-67
THE LIFE-HISTORY OF THE MELON WEEVIL, 8ARIS GRANULIPENNIS (TOURN.) IN ISRAEL.
E Rivnay
8ull Entomol R 51(1):115-122
Apr 1960 421 887
8aris granulipennis, Isreal.

196-67
A NEW HOST AND DISTRI8UTIONAL RECORD FOR SYSTOLE GENICULATA (HYMENOPTERA: EURYTOMIDAE).
R 8 Roberts
J Econ Entom 56(4):541-542
Aug 1963 421 J822
Eurytomidae, Hymenoptera, Systole geniculata.

197-67
SPREAD OF 8OLL WEEVIL AND ITS CONTROL IN FAR WEST TEXAS.
O T Robertson L W Noble G E Orr
J Econ Entom 59(3):754-756
Jun 1966 421 J822
Anthonomus grandis, Anthonomus grandis, Control, Spread,
Texas.

198-67
ASIPHONAPHIS WILSON AND DAVIS IN NORTH AMERICA (HOMOP-TERA: APHIDIDAE).
A G Robinson
Can Entom 96(8):1093-1097
Aug 1964 421 C16
Aphididae, Asiphonaphis, Homoptera, North America.

199-67
A NEW SPECIES OF DACTYNOTUS RAFINESQUE (HOMOPTERA: APHI-DIDAE) FROM GRINDELIA SQUARROSA (PURSH) DUNAL.
A G Robinson
Can Entom 96(10):1330-1332
Oct 1964 421 C16
Aphididae, Dactynotus rafinesque, Grindelia squarrosa,
Homoptera.

200-67
A NEW SPECIES OF ACROPSILUS FROM THE SOLOMON ISLANDS (DIPTERA: DOLICHOPODIDAE).
H Robinson
Can Entom 95(8):830-831
Aug 1963 421 C16
Acropsilus, Diptera, Dolichopodidae, Solomon islands.

201-67
FIELD STUDIES ON FLIGHT PATTERNS AND OLFACTORY RESPONSES OF AM8ROSIA 8EETLES IN DOUGLAS-FIR FORESTS OF WESTERN OREGON.
J A Rudinsky G E Daterman
Can Entom 96(10):1339-1352, 8I8L. 1351-1352, TA8S.
Oct 1964 421 C16
Gnathotrichus retusus, Gnathotrichus sulcatus,
Insect flight, Oregon, Pseudotsuga menziesii,
Trypodendron lineatum.

202-67
ON THE STAGES IN THE DEVELOPMENT OF SYNTOMOSPHYRUM AL8ICLAVUS KERRICH (HYM., GULOPHIDAE), A PARASITE OF TSETSE FLIES.
D S Saunders
8ull Entomol R 51(1):25-32
Apr 1960 421 887
Glossina, Insect morphology, Syntomosphyrum albiclavus.

203-67
THE WHITE-CLU88ED FORM OF SYNTOMOSPHYRUM (HYM., EULO-PHIDAE) PARASITIC ON TSETSE FLIES.
D S Saunders
8ull Entomol R 51(1):17-20
Apr 1960 421 887
Glossina morsitans, Glossina palpalis,
Syntomosphyrum glossinae.

204-67
SEASONAL DENSITIES AND CONTROL OF THE CYCLAMEN MITE, STENEOTARSONEMUS PALLIDUS (ACARINA: TARSONEMIDAE) ON STRAW8ERRY IN NEW YORK.
G A Schaefers
J Econ Entom 56(5)565-571, TA8S.
Oct 1963 421 J822
Acarina, New york, Population (insects),
Steneotarsonemus pallidus,
Steneotarsonemus pallidus (8anks), Strawberries,
Tarsonemidae.

205-67
THE FEASIBILITY OF USING A NEOAPLECTANID NEMATODE FOR CONTROL OF SOME FOREST INSECT PESTS.
D C Schmiege
J Econ Entom 56(4):427-431
Aug 1963 421 JB22
Forest insects, Insect pests, Nematodes, Neoaplectana, Parasitism.

206-67
A TECHNIQUE FOR THE STATISTICAL SAMPLING OF FANNIA LARVAL DENSITIES ON POULTRY RANCHES.
R B Schoenburg T M Little
J Econ Entom 59(6):1536-1537
Dec 1966 421 JB22
Fannia spp., Larvae, Poultry houses, Sampling (statistics).

207-67
THE ECONOMIC SIGNIFICANCE OF COLLEMBOLA IN THE SALINAS VALLEY OF CALIFORNIA.
D B Scott
J Econ Entom 57(2):297-298
Apr 1964 421 JB22
California, Collembola.

208-67
THE WORLD RHYPAROCHROMINAE (HEMIPTERA: LYGAEIDAE) III. NEW RHYPAROCHROMINAE FROM THE ETHIOPIAN REGION.
G G E Scudder
Can Entom 95(12):1233-1253
Dec 1963 421 C16
Ethiopia, Hemiptera, Lygaeidae, Rhyparochrominae.

209-67
WING BASE STRUCTURE IN LEPIDOPTERA. III. TAXOMIC CHARACTERS.
J Sharplin
Can Entom 96(7):943-949
Jul 1964 421 C16
Insect taxonomy, Lepidoptera, Wings (insects).

210-67
WING BASE STRUCTURE IN LEPIDOPTERA. II. HIND WING BASE.
J Sharplin
Can Entom 95(11):1121-1145
Nov 1963 421 C16
Lepidoptera, Wings (insects), Zeugloptera.

211-67
WING BASE STRUCTURE IN LEPIDOPTERA I. FORE WING BASE.
J Sharplin
Can Entom 95(10):1024-1050, BIBL. 1050
Oct 1963 421 C16
Lepidoptera, Wings (insects).

212-67
A NEW CANADIAN SPECIES OF STENOPTERINA MACQ. WITH NOTES ON THE SPECIES ALLIED TO BREVIPES (FAB.) (DIPTERA:OTITIDAE).
G E Shewell
Can Entom 94(2):194-200
Feb 1962 421 C16
Dacus brevipes (Fab.), Diptera, Insect taxonomy, Otitidae, Stenopterina Macquart.

213-67
MASS-REARING OF THE LARVAE OF NINE NOCTUID SPECIES ON A SIMPLE ARTIFICIAL MEDIUM.
H H Shorey R L Hale
J Econ Entom 58(3):522-524
Jun 1965 421 JB22
Culture media, Insect rearing, Noctuidae.

214-67
OUTBREAKS OF THE FOREST TENT CATERPILLAR, MALACOSOMA DISSTRIA HBN., A PERIODIC DEFOLIATOR OF BROAD-LEAVED TREES IN ONTARIO.
W L Sippell
Can Entom 94(4):408-416, BIBL. 416
Apr 1962 421 C16
Defoliation, Insect outbreaks, Malacosoma disstria, Malacosoma disstria Hbn., Populus, Populus.

215-67
PREFERENTIAL ATTACK BY DENDROCTONUS TEREBRANS ON PINUS ELLIOTTII.
R H Smith
J Econ Entom 56(6):817-819
Dec 1963 421 JB22
Dendroctonus terebrans (Olivier), Pinus elliotti Engelm.

216-67
FIELD STUDIES OF EUROPEAN CORN BORER BIOTYPES IN THE MIDWEST.
A N Sparks H C Chiang A J Keaster M L Fairchild
J Econ Entom 59(4):922-928, PL., TABS.
Aug 1966 421 JB22
Biotypes, Midwest, Ostrinia nubilalis, Ostrinia nubilalis.

217-67
LABORATORY AND FIELD STUDIES OF F1 PROGENIES FROM RECIPROCAL MATINGS OF BIOTYPES OF THE EUROPEAN CORN BORER.
A N Sparks T A Brindly N D Penny
J Econ Entom 59(4):915-921, TABS.
Aug 1966 421 JB22
Biotypes, F1 progeny, Ostrinia nubilalis, Ostrinia nubilalis.

218-67
OBSERVATIONS ON MORTALITY FACTORS OF THE FIR ENGRAVER BEETLE, SCOLYTUS VENTRALIS (COLEOPTERA:SCOLYTIDATE).
R W Stark J H Borden
J Econ Entom 58(6):1162-1163
Dec 1965 421 JB22
Abies, Abies, Scolytus ventralis, Scolytus ventralis LeConte.

219-67
THE BIOLOGY OF PISSODES TERMINALIS HOPPING (COLEOPTERA: CURCULIONIDAE) IN CALIFORNIA.
R W Stark D L Wood
Can Entom 96(9):1208-1218, BIBL. 1217-1218, TABS.
Sep 1964 421 C16
California, Coleoptera, Curculionidae, Pissodes terminalis Hopping.

220-67
A COLOR CHARACTERISTIC FOR SEXING LIVE ADULT LESSER GRAIN BORERS.
P G Stemley D A Wilbur
J Econ Entom 59(3):760-761
Jun 1966 421 JB22
Color characteristic, Rhyzopertha dominica, Sex determination.

221-67
SEQUENTIAL SAMPLING FOR THE LODGEPOLE NEEDLE MINER, EVAGORA MILLERI.
R E Stevens R W Stark
J Econ Entom 55(4):491-494
Aug 1962 421 JB22
Population statistics (insects), Recurvaria milleri, Recurvaria milleri, Sampling (statistics).

222-67
SEASONAL HISTORY OF ROOT-INFESTING PHYLLOXERA VITIFOLIAE (FITCH) (HOMOPTERA: PHYLLOXERIDAE) IN ONTARIO.
A B Stevenson
Can Entom 96(7):979-987
Jul 1964 421 C16
Homoptera, Ontario, Phylloxera vitifoliae (Fitch), Phylloxeridae.

223-67
PATASSON LUNA IN OVERWINTERING EGGS OF THE ALFALFA WEEVIL.
F A Streams R W Fuester
J Econ Entom 59(2):331-333
Apr 1966 421 JB22
Biological control, Hibernation, Hymenoptera, Hypera postica, Hypera postica (Gyllenhal), Insect eggs, Mymaridae, Parasitic insects, Patasson luna (Girault).

224-67
THE CLERID BEETLE, THANASIMUS DUBIUS, AS A PREDATOR OF THE SOUTHERN PINE BEETLE.
R C Thatcher L S Pickard
J Econ Entom 59(4):955-957, PL.
Aug 1966 421 JB22
Clerid beetle, Dendroctonus frontalis, Dendroctonus frontalis, Predaceous insects, Thanasimus dubius.

225-67
FLY POPULATIONS IN DAIRY BARNS.
HANSENS, E J.
J Econ Entom 56(6):842-844, TABS.
Dec 1963 421 JB22
Dairy barns, Diptera, Fannia, Insect populations, Musca domestica L., Stomoxys calcitrans, Stomoxys calcitrans.

10 226-67

226-67
THE TACHINIDS OF TRINIDAD. V. SIPHOSTURMIINES AND MASIPHYIINES.
W R Thompson
Can Entom 95(12):1292-1320
Dec 1963 421 C16
Masiphya, Masiphydidea, Mystacomyoidea, Pseudomasiphya, Siphosturmia, Tachinidae, Trinidad.

227-67
THE TACHNIDS OF TRINIDAD IV. WINTHEMIINES.
W R Thompson
Can Entom 95(9):953-995, BIBL. 994-995
Sep 1963 421 C16
Diptera, Tachinidae, Trinidad, Winthemia.

228-67
PINEUS PINEOIDES (CHOLODKOVSKY) (HOMOPTERA: ADELGIDAE) ON RED SPRUCE IN NEW BRUNSWICK AND NOVA SCOTIA.
G R Underwood
Can Entom 95(7):720-724
Jul 1963 421 C16
Adelgidae, Homoptera, New brunswick, Nova scotia, Picea rubens, Pineus pineoides.

229-67
THE HOST-PARASITE RELATIONSHIP OF THE EUROPEAN CORN BORER, OSTRINIA NUBILALIS, AND THE PROTOZOAN, PEREZIA PYRAUSTAE, IN DELAWARE.
R S Van Denburgh P P Burbutis
J Econ Entom 55(1):65-67
Feb 1962 421 JB22
Ostrinia nubilalis, Ostrinia nubilalis, Parasites, Perezia pyraustae, Protozoa.

230-67
THE RE-INTRODUCTION AND RECOVERY OF LYDELLA STABULANS GRISESCENS, A PARASITE OF THE EUROPEAN CORN BORER IN DELAWARE.
R S Van Denburgh Paul P Burbutis George T York
J Econ Entom 55(1):11-14, TABS.
Feb 1962 421 JB22
Lydella stabulans grisescens, Ostrinia nubilalis, Ostrinia nubilalis, Parasites.

231-67
THE AVAILABILITY OF THE COCONUT BUG, PSEUDOTHERAPTUS WAYI BROWN, (COREIDAE).
F L Vanderplank
Bull Entomol R 51(1):57-60
Apr 1960 421 BB7
Coconuts, Coreidae, Pseudotheraptus wayi Brown.

232-67
A SURVEY OF THE SUCKING INSECTS OF THE BIRCHES IN THE MARITIME PROVINCES.
I W Varty
Can Entom 95(10):1097-1106, TABS.
Oct 1963 421 C16
Betula, Hemiptera, Homoptera, Maritime Provinces, Sucking insects.

233-67
THE PROVANCHER TYPES OF ORTHOPTERA.
V R Vickery D K M Kevan
Can Entom 96(12):1549-1554
Dec 1964 421 C16
Orthoptera.

234-67
THE GENUS SCHISTOCERCA (ORTHOPTERA : ACRIDIDAE) IN CANADA.
V R Vickery D K M Kevan
Can Entom 96(12):1555-155B
Dec 1964 421 C16
Acrididae, Canada, Orthoptera, Schistocerca.

235-67
A NEW SPECIES OF DOLICHOPUS FROM NORTH CAROLINA (DIPTERA: DOLICHOPODIDAE).
J R Vockeroth
Can Entom 94(6):502-505
May 1962 421 C16
Diptera, Dolichopodidae, Dolichopus, Insect morphology.

236-67
THE RELATIONSHIP OF THE FRUITING OF THE COTTON PLANT AND OVERWINTERED BOLL WEEVILS TO THE F1 GENERATION.
J K Walker Jr
J Econ Entom 59(2):323-326, TABS.
Apr 1966 421 JB22
Anthonomus grandis, Anthonomus grandis Boheman, Cotton, Hibernation, Insect genetics, Oviposition.

237-67
LABORATORY AND FIELD INVESTIGATIONS OF THE EFFECT OF TEMPERATURE ON THE DEVELOPMENT OF NEODIPRION SERTIFER (GEOFF.) IN THE COCOON.
D R Wallace C R Sullivan
Can Entom 95(10):1051-1066
Oct 1963 421 C16
Insect morphology, Neodiprion sertifer (Geoff.), Pupal cases, Temperature.

238-67
THE DISCOVERY OF STREBLOCERA IN CANADA (HYMENOPTERA: BRACONIDAE).
G S Walley M R MacKay
Can Entom 95(9):999-1001
Sep 1963 421 C16
Braconidae, Canada, Hymenoptera, Streblocera.

239-67
FLUORESCENT BIOLOGICAL STAINS AS MARKERS FOR DROSOPHILA.
H E Wave T J Henneberry H C Mason
J Econ Entom 56(6):B90-B91
Dec 1963 421 JB22
Biological stains, Drosophila melanogaster Meigan, Fluorescent substances, Labeling.

240-67
NATURAL SOURCE OF FOOD OF THE APPLE MAGGOT.
W T A Wellson F A Wood
J Econ Entom 59(4):997-99B
Aug 1966 421 JB22
Insect food, Rhagoletis pomonella, Rhagoletis pomonella.

241-67
RELATIONSHIP OF PREDATORY AND INJURIOUS INSECTS IN COTTON FIELDS IN THE SALT RIVER VALLEY AREA OF ARIZONA.
G P Wene L W Sheets
J Econ Entom 55(3):395-39B, TABS.
Jun 1962 421 JB22
Cotton, Insect pests, Predaceous insects.

242-67
WHITE HORSENETTLE OR SILVERLEAF NIGHTSHADE, AN IMPORTANT HOST OF LYGUS BUGS.
G P Wene L W Sheets
J Econ Entom 57(1):1B1
Feb 1964 421 JB22
Lygus hesperus, Solanum elaegnifolium, White horsenettle.

243-67
DISTRIBUTION OF THE GRAPE MEALYBUG ON PEAR.
P H Westigard
J Econ Entom 57(1):1-3, BIBL., TABS.
Feb 1964 421 JB22
Pears, Pseudococcus maritimus, Pseudococcus maritimus.

244-67
THE LARGE ASPEN TORTRIX, CHORISTONEURA CONFLICTANA, IN CALIFORNIA (LEPIDOPTERA: TORTRICIDAE).
B E Wickman
J Econ Entom 56(5):593-596
Oct 1963 421 JB22
California, Choristoneura conflictana (Walker), Large aspen tortrix, Lepidoptera, Tortricidae.

245-67
NEW SPECIES AND KEYS TO THE SPECIES OF ABLAUTUS LOEW AND OMNIABLAUTUS PRITCHARD (DIPTERA: ASILIDAE).
J Wilcox
Can Entom 9B(7):673-6B2
Jul 1966 421 C16
Ablautus Loew, Asilidae, Diptera, Insect identification, Insect taxonomy, Omniablautus Pritchard.

246-67
A NOTE ON COLOUR PREFERENCES OF SOME HOMOPTERA AND THYSANOPTERA IN BRITISH COLUMBIA.
W H A Wilde
Can Entom 94(1):107
Jan 1962 421 C16
Color preference, Homoptera, Insect traps, Insects, Thysanoptera.

247-67
DOWNY CHESS GRASS AS A HOST OF THE PEAR PSYLLA.
W H A Wilde
Can Entom 95(9):1005-1006

Sep 1963 421 C16
8romus tectorum L., Plant hosts, Psylia pyricola,
Psylla pyricola Foerster.

248-67
A NEW SPECIES OF DYSMICOCCUS FERRIS (PSEUDOCOCC1DAE,
HOMOPTERA) ON 8ANANA.
D J Williams
Bull Entomol R 51(2):239-241)
Jul 1960 421 B87
8ananas, Dysmicoccus Ferris, Homoptera, Insect taxonomy,
Pseudococcidae.

249-67
THE CONTROL OF 8LACK SAGE (CORDIA MACROSTACHYA) IN
MAURITIUS: THE INTRODUCTION, 8IOLOGY AND 81ONOMICS OF A.
SPECIES OF EURYTOMA (HYMENOPTERA, CHALCIDOIDEA).
J R Williams P O Wiehe
8ull Entomol R 51(1):123-135
Apr 1960 421 887
Chalcidoidea, Cordia macrostachya, Eurytoma, Hymenoptera,
Insect biology, Mauritius.

251-67
EFFECTS OF DIFFERENT POPULATION LEVELS OF THE EUROPEAN
PINE SAWFLY ON YOUNG SCOTCH PINE TREES.
L F Wilson
J Econ Entom 59(5):1043-1049
Oct 1966 421 J822
Insect population, Neodiprion sertifer,
Neodiprion sertifer (Geoffroy), Pinus sylvestris.

252-67
SITE OF SPRUCE 8UDWORM EGG MASSES ON THEIR PREFERRED HOSTS
IN THE LAKE STATES.
L F Wilson J L 8ean
J Econ Entom 56(5):574-578, TA8S.
Oct 1963 421 J822
Choristoneura fumiferana,
Choristoneura fumiferana (Clemens), Insect eggs,
Lake states, Plant hosts.

253-67
APHID TRAP COLLECTIONS OVER A THREE-YEAR PERIOD FROM FOUR
SOUTHERN FLORIDA LOCATIONS.
D O Wolfenbarger
J Econ Entom 59(4):953-954
Aug 1966 421 J822
Aphidae, Florida, Trap collections.

254-67
THE EXTERNAL MORPHOLOGY OF THE ADULTS AND ULTIMATE LARVAL
INSTAR OF THE LARCH SAWFLY, PRISTIPHORA ERICHSONII (HTG.)
(HYMENOPTERA: TENTHREDINIDAE).
H R Wong
Can Entom 95(9):897-921, 8I8L. 920-921
Sep 1963 421 C16
Hymenoptera, Insect morphology, Larvae,
Pristiphora erichsonii, Pristiphora erichsonii,
Tenthredinidae.

255-67
THE OLFACTORY RESPONSE OF IPS CONFUSUS (LECONTE) (COLE-
OPTERA: SCOLYTIDAE) TO THE SECONDARY ATTRACTION IN THE LA8-
ORATORY.
D L Wood R W 8ushing
Can Entom 95(10):1066-1078, 818L. 1077-1078
Oct 1963 421 C16
Attractants, Coleoptera, Ips confusus (LeConte), Scolytidae.

256-67
LIFE HISTORY AND CONTROL OF A CASE8EARER, CHLAMISUS CRI8RI-
PENNIS (COLEOPTERA:CHRYSOMELIDAE), ON BLUEBERRY.
G W Wood
J Econ Entom 59(4):823-825
Aug 1966 421 J822
8lueberries, Casebearer, Chlamisus cribripennis,
Coleoptera: Chrysomelidae, Life history.

257-67
AN UNUSUAL RECORD OF THE SOUTHERN FIRE ANT, SOLENOPSIS XY-
LONI, IN NORTH CAROLINA.
D L Wray
J Econ Entom 55(1):145
Feb 1962 421 J822
Formicidae, Population migration (insects),
Population statistics (insects), Solenopsis xyloni,
Southern fire ants.

258-67
IDENTIFICATION AND OCCURRENCE OF COCKROACHES IN DWELLINGS
AND 8USINESS ESTA8LISHMENTS IN NORTH CAROLINA.
C G Wright
J Econ Entom 58(5):1032-1033
Oct 1965 421 J822
8latella germanica, 8latta orientalis, Blattidae, Houses,
North Carolina, Periplaneta americana,
Periplaneta fuliginosa, Supella supellectilium.

259-67
SOME EFFECTS OF HOST AGE ON PARASITISM 8Y NASONIA VITRIPEN-
NIS (WALK.) (HYMENOPTERA: PTEROMALIDAE).
H G Wylie
Can Entom 95(8):881-886 TA8S.
Aug 1963 421 C16
Hymenoptera, Insect hosts, Nasonia vitripennis, Parasitism,
Pteromalidae.

260-67
FIVE NEW SPECIES OF THE CADDISFLY POLYCENTROPUS FROM
SOUTH AMERICA (TRICHOPTERA: POLYCENTROPODIDAE).
Toshio Yamamoto
Can Entom 98(9):908-912
Sep 1966 421 C16
Insect morphology, Insect taxonomy, Polycentropodidae,
Polycentropus, South america, Trichoptera.

Physiology & Biochemistry

261-67
DEHYDROCHLORINATION AND DDT-RESISTANCE IN AEDES AEGYPTI.
Z H Abedi J R Duffy A W A 8rown
J Econ Entom 56(4):511-517, 8I8L.,516-517, TA8S.
Aug 1963 421 J822
Aedes aegypti (L.), Dehydrochlorination, DDT ,
Insecticide resistant Insects.

262-67
RESISTANCE OF THE ALFALFA WEEVIL TO HEPTACHLOR.
V E Adler C C 8lickenstaff
J Econ Entom 57(2):299-300, PL.
Apr 1964 421 J822
Heptachlor, Hypera postica, Hypera postica,
Insecticide resistant Insects.

263-67
CAUSAL AGENTS OF 8ACTERIAL DISEASES OF THE SILKWORM AND THE
USE OF ANTI8IOTICS IN THEIR CONTROL.
E G Afrikian
J Invertebrate Path 2(3):299-304
1960 421 J826
Antibiotics, 8acteria, 8ombyx mori (Linnaeus).

264-67
CHARACTERS FOR DETERMINATION OF SEX OF THE 80LL WEEVIL.
H R Agee
J Econ Entom 57(4):500-501
Aug 1964 421 J822
Anthonomus grandis, Anthonomus grandis 8oheman,
Sex determination.

265-67
RESISTANCE INDUCTION IN TETRANYCHUS TELARIUS WITH
8INAPACRYL.
H E Aller D C Lippold
J Econ Entom 56(6):721-722, 818L. 721-722
Dec 1963 421 J822
8inapacryl, Insecticide resistant Insects,
Tetranychus telarius (L.).

266-67
MATING 8EHAVIOR OF THE SCREW-WORM FLY AS AFFECTED 8Y
DIFFERENCES IN STRAIN AND SIZE.
D A Alley 8 G Hightower
J Econ Entom 59(6):1499-1502
Dec 1966 421 J822
Cochliomyia hominivorax, Cochliomyia hominivorax,
Sex behavior.

10 267-67

267-67
A SIMPLIFIED TECHNIQUE FOR THE LABORATORY REARING OF FANNIA CANNICULARIS.
J R Anderson J H Poorbaugh
J Econ Entom 57(2):254-256
Apr 1964 421 JB22
Fannia cannicularis, Insect rearing.

268-67
HOST SPECIFICITY STUDIES OF PHRYDIUCHUS TOPIARIUS AND PHRYDIUCHUS SP.
L A Andres
J Econ Entom 59(1):69-76
Feb 1966 421 JB22
Biological control (insects), Phrydiuchus sp., Phrydiuchus topiarius (Germar).

269-67
PARASITES OF TWO WEEVILS, MICROLARINUS LAREYNII AND M. LYPRIFORMIS, THAT FEED ON THE PUNCTURE VINE, TRIBULUS TERRESTRIS L.
G W Angalet L A Andres
J Econ Entom 58(6):1167
Dec 1965 421 JB22
Microlarinus lareynii (Jacquelin du Val), Microlarinus lypriformis (Wollaston), Parasitism, Puncture vine, Seed weevil, Stem weevil.

270-67
ECOLOGICAL AND NUTRITIONAL STUDIES ON COLEOMEGILLA MACULATA DEGEER (COLEOPTERA: COCCINELLIDAE). II. THE EFFECTS OF DIFFERENT POPULATION DENSITIES AND SEX RATIOS ON OVIPOSITION.
Y H Ataliah
J Econ Entom 59(5):1179-1180
Oct 1966 421 JB22
Coccinellidae, Coleomegilla maculata DeGeer, Coleoptera, Ecology, Insect population, Nutrition, Oviposition, Sex ratios.

271-67
DDT RESISTANCE IN HONEY BEES.
E L Atkins Jr L D Anderson
J Econ Entom 55(5):791-792, TABS.
Oct 1962 421 JB22
Apis mellifera, Apis mellifera L., DDT , Insecticide resistant insects.

272-67
LABORATORY STUDIES ON THE FEEDING HABITS OF SEVEN SPECIES OF ANTS (HYMENOPTERA: FORMICIDAE) IN ONTARIO.
G L Ayre
Can Entom 95(7):712-715
Jul 1963 421 C16
Formicidae, Hymenoptera, Ontario.

273-67
EXPERIMENTS ON CONTROL OF THE ALFALFA SEED CHALCID, BRUCHOPHAGUS RODDI, IN SEED ALFALFA.
O G Bacon W D Riley J R Russell W C Batiste
J Econ Entom 57(1):105-110, TABS.
Feb 1964 421 JB22
Alfalfa, Alfalfa seed chalcid, Bruchophagus roddi, Insect control.

274-67
THE INFLUENCE OF CERTAIN BIOLOGICAL AND ENVIRONMENTAL FACTORS ON INSECTICIDE TOLERANCE OF THE LYGUS BUG, LYGUS HESPERUS.
O G Bacon W D Riley G Zweig
J Econ Entom 57(2):225-230, BIBL. 229-230, TABS.
Apr 1964 421 JB22
Biology, Environment, Insecticide resistant insects, Lygus bugs, Lygus hesperus.

275-67
THE EPIZOOTIOLOGY OF EUROPEAN FOULBROOD OF THE LARVAL HONEY BEE, APIS MELLIFERA LINNAEUS.
L Bailey
J Invertebrate Path 2(2):67-83
1960 421 JB26
Apis mellifera Linnaeus, Epizootic diseases, European foulbrood, Streptococcus pluton (White).

276-67
INSECTICIDE RESISTANCE IN THE ADULT WESTERN CORN ROOTWORM IN NEBRASKA.
H J Ball G T Weekman
J Econ Entom 55(4):439-441
Aug 1962 421 JB22
Diabrotica virgifera, Diabrotica virgifera, Insecticide resistant insects, Insecticides.

277-67
DIFFERENTIAL EFFECT OF GAMMA RADIATION ON FRUIT FLIES AND FRUIT FLY PARASITES.
J W Balock Honolulu, Hawaii U. S. Dept. Of Agriculture
J Econ Entom 58(6):1169
Dec 1965 421 JB22
Gamma rays, Parasitism, Tephritidae, Tephritidae.

278-67
STUDIES ON SOD WEBWORMS. II. OVIPOSITION BEHAVIOR OF CRAMBUS TRISECTUS UNDER REGULATED LIGHT CONDITIONS IN THE LABORATORY.
A C Banerjee G C Decker
J Econ Entom 59(5):1245-1248
Oct 1966 421 JB22
Crambus trisectus Walker, Oviposition, Sod webworms.

279-67
STUDIES ON SOD WEBWORMS. I. EMERGENCE RHYTHM, MATING, AND OVIPOSITION BEHAVIOR UNDER NATURAL CONDITIONS.
A C Banerjee G C Decker
J Econ Entom 59(5):1237-1244
Oct 1966 421 JB22
Crambus trisectus Walker, Emergency rhythm, Mating, Oviposition, Sod webworms.

280-67
LABORATORY EVALUATION OF CERTAIN CHLORINATED HYDROCARBON INSECTICIDES AGAINST THE IMPORTED FIRE ANT.
W A Banks C S Lofgren C E Stringer Jr
J Econ Entom 57(2):298-299
Apr 1964 421 JB22
Insecticides, Solenopsis saevissima richteri, Solenopsis saevissima richteri.

281-67
DEVELOPMENT, SURVIVAL AND FECUNDITY OF THE POTATO APHID MACROSIPHUM EUPHORBIAE (THOMAS), AT CONSTANT TEMPERATURES.
C A Barlow
Can Entom 94(6):667-671
Jun 1962 421 C16
Insect fertility, Insect morphology, Insect mortality, Insect temperature, Macrosiphum euphorbiae, Macrosiphum euphorbiae (Thomas).

282-67
RESISTANCE TO DDT IN THE ADULT CODLING MOTH AND REFERENCE CURVES FOR GUTHION AND CARBARYL.
M M Barnes H R Moffitt
J Econ Entom 56(6):722-725, TABS.
Dec 1963 421 JB22
Azinphosmethyl, Carbaryl, Carpocapsa pomonella, Carpocapsa pomonella (L.), DDT , Insecticide resistant insects.

283-67
FURTHER TESTS OF THE EFFECT OF FOOD PLANTS ON THE MIGRATORY GRASSHOPPER.
O L Barnes
J Econ Entom 58(3):475-479
Jun 1965 421 JB22
Food plants, Melanoplus sanguinipes, Melanoplus sanguinipes (F.).

284-67
OBSERVATIONS ON THE LIFE HISTORY OF THE DESERT GRASSHOPPER (TRIMEROTROPIS PALLIDIPENNIS PALLIDIPENNIS) IN LABORATORY AND INSECTARY CAGES.
O L Barnes
J Econ Entom 56(4):525-529, TABS.
Aug 1963 421 JB22
Grasshoppers, Insect cages, Life cycle, Trimerotropis pallidipennis pallidipennis (Burmeister).

285-67
TESTS FOR PARTHENOGENESIS IN MIGRATORY, DIFFERENTIAL, AND DESERT GRASSHOPPERS.
O L Barnes
J Econ Entom 58(1):173-174
Feb 1965 421 JB22
Melanoplus differentialis, Melanoplus differentialis Thomas, Melanoplus sanguinipes, Melanoplus sanguinipes (f), Parthenogenesis, Schistocerca gregaria, Schistocerca gregaria Forskal.

2B6-67
IN VITRO ESTABLISHMENT AND DEVELOPMENT OF EUCOSMA SP. LARVAE FROM CONES OF PINUS RESINOSA ON AN ARTIFICIAL NUTRIENT MEDIUM.
S J Barras M Norris Jr
J Econ Entom 5B(5):1033-1034
Oct 1965 421 JB22
Culture media, Eucosma sp., Larvae, Pinus resinosa.

2B7-67
THE STABILIZATION OF RELATIVE HUMIDITY WITH HONEY IN CLOSED SYSTEMS.
B R Bartlett
J Econ Entom 55(1):149-150
Feb 1962 421 JB22
Food moisture, Honey, Humidity, Insects, Temperature.

2B8-67
TEMPERATURES LETHAL TO THE ALFALFA WEEVIL.
M H Bass
J Econ Entom 59(6):1530-1531
Dec 1966 421 JB22
Heat, Hypera postica, Hypera postica.

2B9-67
INFLUENCE OF AERATION DURING GAMMA IRRADIATION OF SCREW-WORM PUPAE.
A H Baumhover
J Econ Entom 56(5):628-631, BIBL. 631
Oct 1963 421 JB22
Aeration, Cochliomyia hominivorax, Cochliomyia hominivorax (Coquerel), Gamma rays, Irradiation, Pupae.

290-67
SEXUAL AGGRESSIVENESS OF MALE SCREW-WORM FLIES MEASURED BY EFFECT ON FEMALE MORTALITY.
A H Baumhover
J Econ Entom 5B(3):544-54B
Jun 1965 421 JB22
Cochliomyia hominivorax, Cochliomyia hominivoray (Coquerel), Mortality, Sex behavior.

291-67
LIPID CONTENT OF THE ALFALFA WEEVIL AS RELATED TO SEASONAL ACTIVITY.
S E Bennet C A Thomas Jr
J Econ Entom 57(2):237-239.
Apr 1964 421 JB22
Hypera postica, Hypera postica, Lipids, Seasonal activity (insects).

292-67
COMPARATIVE MORPHOLOGY OF SOME CHRYSOBOTHRIS LARVAE (COLEOPTERA: BUPRESTIDAE) OF EASTERN CANADA.
P Benoit
Can Entom 96(B):1107-1117
Aug 1964 421 C16
Buprestidae, Canada, Chrysobothris, Coleoptera, Insect morphology, Larvae.

293-67
HISTOPATHOLOGICAL CHANGES AND HISTOCHEMICAL STUDIES ON THE NUCLEIC ACID METABOLISM IN THE POLYHEDROSIS-INFECTED GUT OF DIPRION HERCYNIAE (HARTIG).
G Benz
J Invertebrate Path 2(3):259-273
1960 421 JB26
Diprion hercyniae (Hartig), Nucleic acids, Polyhedroses.

294-67
SEX ATTRACTANTS OF HELIOTHIS ZEA AND H VIRESCENS.
R S Berger J M McGough D F Martin
J Econ Entom 5B(5):1023-1024
Oct 1965 421 JB22
Heliothis virescens, Heliothis zea, Sex attractants.

295-67
INSECT ATTRACTANTS:NEW ATTRACTANTS FOR THE MEDITERRANEAN FRUIT FLY.
M Beroza N Green S I Gertler L F Steiner D H Miyashita
J Agr Food Ch 9(5):361-365
Sep 1961 3B1 JB223
Attractants, Ceratitis capitata (Wied.).

296-67
TERT-BUTYL AND TERT-PENTYL ESTERS OF 6-METHYL-3-CYCLOHEXENE-1-CARBOXYLIC ACID AS ATTRACTANTS FOR THE MEDITERRANEAN FRUIT FLY.
M Beroza T P McGovern L F Steiner D H Miyashita
J Agr Food Ch 12(3):25B-259
May 1964 3B1 JB223
Attractants, Ceratitis capitata, Ceratitis capitata (Weidemann), Esters, 6-methyl-3-cyclohexene-1-carboxylic acid.

297-67
THE BIOLOGY OF THE BOLL WEEVIL IN RELATION TO COTTON TYPE.
J H Black T F Leigh
J Econ Entom 56(6):7B9-790, TABS.
Dec 1963 421 JB22
Anthonomus grandis, Anthonomus grandis Boheman, Cotton, Insect biology.

29B-67
FAILURE OF THE GRASSHOPPERS MELANOPLUS BILITURATUS AND MELANOPLUS CONFUSUS TO CROSS-MATE IN CONFINEMENT.
C C Blickenstaff
J Econ Entom 55(3):421
Jun 1962 421 JB22
Grasshoppers, Insect mating, Melanoplus bilituratus, Melanoplus confusus.

299-67
INFESTATION OF OVERWINTERING NYMPHS OF CHORTOPHAGA VIRIDIFASCIATA BY MERMITHIDS.
C C Blickenstaff M Sharifullah
J Econ Entom 55(2):26B
Apr 1962 421 JB22
Chortophaga viridifasciata, Hibernation, Mermithids, Nymphs.

300-67
LABORATORY INSECTICIDE TESTS AGAINST THE BOLLWORM.
G T Bottger A N Sparks
J Econ Entom 55(1):143-144
Feb 1962 421 JB22
Heliothis zea, Heliothis zea, Insecticides.

301-67
RELATION OF GOSSYPOL CONTENT OF COTTON PLANTS TO INSECT RESISTANCE.
G T Bottger E T Sheehan M J Lukefahr
J Econ Entom 57(2):2B3-2B5, PL.
Apr 1964 421 JB22
Cotton, Gossypol, Insect resistant plants.

302-67
LABORATORY TESTS OF INSECTICIDES AGAINST LYGUS HESPERUS ON COTTON.
G T Bottger A N Sparks
J Econ Entom 55(1):142-143
Feb 1962 421 JB22
Cotton, Insecticides, Lygus hesperus.

303-67
CONTROL OF THE BLUEBERRY THRIPS IN MAINE.
L W Boulanger D A Abdalla
J Econ Entom 59(4):1007-100B
Aug 1966 421 JB22
Frankliniella vaccinii, Frankliniella vaccinii, Maine.

304-67
MECHANISMS OF INSECT RESISTANCE TO THE CHLOROHYDROCARBON INSECTICIDES.
F R Bradbury H Standen
J Sci Food A 11(2):92-100
Feb 1960 3B2 SO12
Chlorohydrocarbons, Insecticide resistant insects, Musca domestica.

305-67
ABSOPTION AND METABOLISM OF RUELENE BY ARTHROPODS.
U F Brady Jr B W Arthur
J Econ Entom 55(6):B33-B36, TABS.
Dec 1962 421 JB22
Adsorption, Arthropoda, Insect metabolism, Ruelene.

306-67
A TECHNIQUE OF CONTINUOUS EXPOSURE FOR DETERMINING RESISTANCE OF HOUSE FLIES TO INSECTICIDES.
U E Brady
J Econ Entom 59(3):764-765
Jun 1966 421 J822
Exposure, Insecticides, Musca domestica, Resistance.

307-67
RESISTANCE TO DDT IN HELIOTHIS VIRESCENS.
J R Brazzel
J Econ Entom 56(5):571-574
Oct 1963 421 J822

10 308-67

DDT , Heliothis virescens (F.),
Insecticide resistant insects.

308-67
THE STATUS OF BOLL WEEVIL RESISTANCE TO CHLORINATED HYDROCARBON INSECTICIDES IN TEXAS.
J R Brazzel O E Shipp
J Econ Entom 55(6):941-944
Dec 1962 421 JB22
Anthonomus grandis, Anthonomus grandis, Chlorine, Hydrocarbons, Insecticides.

309-67
DDT RESISTANCE IN HELIOTHIS ZEA.
J R Brazzel
J Econ Entom 57(4):455-457
Aug 1964 421 JB22
DDT , Heliothis zea (Boddie), Insecticide resistant insects.

310-67
REDUCTION OF ADULT HOUSE-FLY EMERGENCE BY THE EFFECTS OF BACILLUS SPP. ON THE DEVELOPMENT OF IMMATURE FORMS.
J D Briggs
J Invertebrate Path 2(4):41B-432, TABS.
1960 421 JB26
Bacillus cereus Frankland and Frankland,
Bacillus thuringiensis var. thuringiensis Berliner,
Musca domestica.

311-67
MECHANICAL EXCISION OF THE RETROCEREBRAL COMPLEX FROM FROZEN COCKROACH HEADS.
B E Brown
J Econ Entom 57(3):41B-419
Jun 1964 421 JB22
Dissection, Neuroendocrines, Periplaneta americana.

312-67
POTENTIAL BACTERIAL PATHOGENS OF INSECTS AND THEIR CHARACTERISTICS.
G E Bucher
J Invertebrate Path 2(2):172-195, BIBL. 193-195, TABS.
1960 421 JB26
Bacteria, Insect diseases, Potential pathogens.

313-67
CARBARYL, PHOSPHAMIDON, AND DDT TESTS ON THE WESTERN HEMLOCK LOOPER IN WASHINGTON.
P E Buffam
J Econ Entom 58(5):1006-100B
Oct 1965 421 JB22
Carbaryl, DDT , Lambdina fiscellaria lugubrosa,
Phosphamidon, Washington.

314-67
ABSORPTION AND METABOLISM OF C14-LABELED DDT BY DDT-SUSCEPTIBLE AND DDT-RESISTANT PINK BOLLWORM ADULTS.
D L Bull P L Adkisson
J Econ Entom 56(5):641-643, TABS.
Oct 1963 421 JB22
Absorption, C14, DDT , Insect metabolism,
Insecticide resistant insects, Pectinophora gossypiella,
Pectinophora gossypiella (Saunders).

315-67
STERILIZATION OF THE MALE ALFALFA WEEVIL (HYPERA POSTICA: CURCULIONIDAE) BY X-RADIATION.
E E Burgess S E Bennett
J Econ Entom 59(2):26B-270
Apr 1966 421 JB22
Hypera postica, Sterilization, X-rays.

316-67
EVIDENCE OF SEX HORMONES IN FEMALES OF SEVERAL SPECIES OF DERMESTIDAE.
W F Burkholder R J Dicke
J Econ Entom 59(3):540-543
Jun 1966 421 JB22
Attagenus piceus, Dermestidae, Sex attractants,
Sex hormones, Trogoderma glabrum, Trogoderma inclusum.

317-67
FIELD RESISTANCE OF HORN FLIES TO THE ORGANIC PHOSPHATE INSECTICIDE RONNEL.
E C Burns B H Wilson
J Econ Entom 56(5):71B
Oct 1963 421 JB22
Haematobia irritans (L.), Insecticide resistant insects,
Insecticides, Ronnel.

318-67
THE DETERMINATION OF FALL ARMYWORM PARASITISM BY DISSECTION.
R W Burrel
J Econ Entom 59(3):763-764
Jun 1964 421 JB22
Dissection, Parasitism, Spodoptera frugiperda,
Spodoptera frugiperda.

319-67
THE EFFECT OF TEMPERATURE ON THE CONSUMPTION OF FAT DURING PUPAL DEVELOPMENT IN GLOSSINA.
E Burseli
Bull Entomol R 51(3):5B3-59B
Nov 1960 421 BB7
Fats, Glossina, Insect morphology, Pupae, Temperature.

320-67
ZIMMERMAN PINE MOTH BIOLOGY AND CONTROL.
J W Butcher R B Carlson
J Econ Entom 55(5):668-671
Oct 1962 421 JB22
Dioryctria zimmermani, Dioryctria zimmermani Grote,
Insect biology, Insecticides, Larvae.

321-67
DEVELOPMENT OF THE BEET ARMYWORM AND ITS PARASITE CHELONUS TEXANUS IN RELATION TO TEMPERATURE.
G D Butler Jr
J Econ Entom 59(6):1324-1327
Dec 1966 421 JB22
Chelonus texanus, Insect rearing, Spodoptera exigua,
Spodoptera exigua.

322-67
TECHNIQUES FOR REARING THE CORN EARWORM, HELIOTHIS ZEA.
P S Callahan
J Econ Entom 55(4):453-457
Aug 1962 421 JB22
Heliothis zea, Heliothis zea, Insect rearing, Larvae.

323-67
EVALUATION OF SOME ORGANIC PHOSPHATE AND CARBAMATE INSECTICIDES AGAINST THIRD-INSTAR GREEN JUNE BEETLE LARVAE.
W V Campbell R L Robertson J M Falter
J Econ Entom 59(3):516-51B
Jun 1966 421 JB22
Cotinis nitada, Larvicides.

324-67
RESPIRATION MEASUREMENT OF TRIBOLIUM CONFUSUM BY GAS CHROMATOGRAPHY.
S D Carlson
J Econ Entom 59(2):335-33B, BIBL. 337-33B
Apr 1966 421 JB22
Chromatography, Insect respiration, Tribolium confusum,
Tribolium confusum Jacquelin duVal.

325-67
OVIPOSITION AND FECUNDITY OF BOLL WEEVILS IN MASS REARING LABORATORY CULTURES.
R T Cast
J Econ Entom 59(1):173-176
Feb 1966 421 JB22
Anthonomus grandis Boheman, Culture, Fertility,
Mass rearing, Oviposition.

326-67
A COMPARISON OF THE AMOUNTS OF METEPA REQUIRED TO STERILIZE THE SCREW-WORM FLY AND THE STABLE FLY.
W F Chamberlain C C Barrett
J Econ Entom 57(2):267-269, TABS.
Apr 1964 421 JB22
Cochliomyia hominivorax, Cochliomyia hominivorax, Metepa,
Sterilization, Stomoxys calcitrans, Stomoxys calcitrans.

327-67
CHEMOSTERILIZATION AND MATING BEHAVIOR OF MALE HOUSE FLIES.
C Chang
J Econ Entom 58(4):669-672, BIBL. 671-672, TABS.
Aug 1965 421 JB22
Chemosterilants, Musca domestica, Musca domestica L,
Sex behavior.

328-67
QUANTITATIVE EFFECTS OF TEPA, METEPA, AND APHOLATE ON STERILIZATION OF MALE HOUSE FLIES.
S C Chang A B Borkovec
J Econ Entom 57(4):4BB-490
Aug 1964 421 JB22

Apholate, Metepa, Musca domestica, Musca domestica L., Sterility, Tepa.

329-67
MICROORGANISMS FROM THE MID-GUT OF LARVAL AND ADULT CULEX QUINQUEFASCIATUS SAY.
J Chao G A Wistreich
J Invertebrate Path 2(3):220-224
1960 421 JB26
Culex quinquefasciatus Say, Microorganisms.

330-67
PINK BOLLWORM RESISTANCE TO DDT IN THE LAGUNA AREA OF MEXICO.
A J Chapman L B Coffin
J Econ Entom 57(1):148-150
Feb 1964 421 JB22
DDT , Insecticide resistant insects, Mexico, Pectinophora gossypiella, Pectinophora gossypiella.

331-67
FIELD STUDIES ON ATTACK FLIGHT AND LOG SELECTION BY THE AMBROSIA BEETLE TRYPODENDRON LINEATUM (OLIV.) (COLEOPTERA: SCOLYTIDAE).
J A Chapman
Can Entom 94(1):74-92, BIBL. 91-92
Jan 1962 421 C16
Attractants, Coleoptera, Insect behavior, Insect flight, Platypodidae, Scolytidae, Trypodendron lineatum (Oliv.).

332-67
SURVIVAL OF NORTHERN CORN ROOTWORM EGGS THROUGH ONE AND TWO WINTERS.
H C Chiang
J Econ Entom 58(3):470-472
Jun 1965 421 JB22
Diabrotica longicornis, Diabrotica longicornis, Environment, Insect eggs.

333-67
CHANGES IN WEIGHT OF ABRADED AND UNABRADED LARVAL PINK BOLLWORM UNDER SUBMERSION AND DESICCATION.
E W Clark C A Richmond
J Econ Entom 57(1):14-16
Feb 1964 421 JB22
Insect physiology, Larvae, Pectinophora gossypiella, Pectinophora gossypiella, Soil moisture.

334-67
LABORATORY STUDIES ON RESISTANCE OF THE BODY LOUSE TO INSECTICIDES.
P H Clark M M Cole
J Econ Entom 57(2):205-210, TABS.
Apr 1964 421 JB22
Insecticide resistant insects, Pediculus humanus humanus, Pediculus humanus humanus.

335-67
DETERMINATION OF RESISTANCE BY DIPPING LICE IN ACETONE SOLUTIONS.
P H Clark M M Cole
J Econ Entom 57(2):296
Apr 1964 421 JB22
Acetone, Insecticide resistant insects, Pediculus humanus humanus, Pediculus humanus humanus.

336-67
INHERITANCE OF RESISTANCE TO DDT IN BLATTELLA GERMANICA.
D G Cochran M H Ross
J Econ Entom 55(1):88-89
Feb 1962 421 JB22
Blatteiia germanica, Blatteiia germanica, DDT , Inheritance, Insecticide resistant insects.

337-67
RESISTANCE TO TELODRIN IN THE GERMAN COCKROACH, BLATTELLA GERMANICA.
D G Cochran M H Ross
J Econ Entom 57(4):485
Aug 1964 421 JB22
Blatteiia germanica, Blatteiia germanica, Insecticide resistant insects, Telodrin.

338-67
GROSS EFFECTS OF GAMMA RADIATION ON THE INDIAN-MEAL MOTH AND THE ANGOUMOIS GRAIN MOTH.
R R Cogburn E W Tilton W E Burkholder
J Econ Entom 59(3):682-685
Jun 1966 421 JB22
Gamma rays, Plodia interpunctelia, Plodia interpunctelia, Sitotroga cerealeiia, Sitotroga cerealeiia.

339-67
EXPERIMENTAL FIELD TECHNIQUES USED TO EVALUATE GYPSY MOTH, PORTHETRIA DISPAR, CONTROL IN NEW YORK.
D P Connoia F B Lewis J L Mcdonough
J Econ Entom 59(2):284-287
Apr 1966 421 JB22
Defoiiation, Frass, Larvae, New York, Porthetria dispar, Porthetria dispar, Spraying.

340-67
AN ENTOMOGENOUS FUNGUS OBSERVED ATTACKING ALFALFA WEEVIL ADULTS IN NEW YORK.
W R Cothran G G Gyrisco
J Econ Entom 59(1):243-244
Feb 1966 421 JB22
Beauveria bassiana (Balsamo), Entomogenous fungi, Hypera postica, Hypera postica (Gyiienhai), New York.

341-67
INFLUENCE OF COLD STORAGE ON THE VIABILITY OF ALFALFA WEEVIL EGGS AND FEEDING ABILITY OF HATCHING LARVAE.
W R Cothran G G Gyrisco
J Econ Entom 59(4):1019-1020, BIBL., PL.
Aug 1966 421 JB22
Cold storage, Eggs, Feeding abiiity, Hypera postica, Hypera postica, Larvae, Viabiiity.

342-67
EFFECT OF REPEATED SPRAYS ON SUSCEPTIBILITY OF CALIFORNIA RED SCALE TO PARATHION.
A W Cressman
J Econ Entom 56(6):884-885
Dec 1963 421 JB22
Aonidiella aurantii, Aonidieiia aurantii (Maskeii), Insecticide resistant insects, Parathion, Spraying.

343-67
STUDIES OF DIMETHOATE FOR CONTROL OF CALIFORNIA RED SCALE.
A W Cressman J E Gilmore
J Econ Entom 57(3):322-324
Jun 1964 421 JB22
Aonidieiia auranti, Aonidieiia aurantii, Dimethoate, Insect control.

344-67
A COMPARISON OF THE NUMBER OF TROPICAL RAT MITES AND TROPICAL FOWL MITES THAT FED AT DIFFERENT TEMPERATURES.
H F Cross G W Wharton
J Econ Entom 57(4):439-443
Aug 1964 421 JB22
Feeding, Ornithonyssus bacoti, Ornithonyssus bacoti (Hirst), Ornithonyssus bursa, Ornithonyssus bursa (Berlese), Temperature.

345-67
A COMPARISON OF THE NUMBER OF TROPICAL RAT MITES AND TROPICAL FOWL MITES THAT FED UNDER VARYING CONDITIONS OF HUMIDITY.
H F Cross G W Wharton
J Econ Entom 57(4):443-445, TABS.
Aug 1964 421 JB22
Feeding, Humidity, Ornithonyssus bacoti, Ornithonyssus bacoti (Hirst), Ornithonyssus bursa, Ornithonyssus bursa (Berlese).

346-67
THE INDUCTION OF SEXUAL STERILITY IN THE SCREW-WORM FLY BY ANTIMETABOLITES AND ALKYLATING AGENTS.
M M Crystal
J Econ Entom 56(4):468-473, BIBL., 473, TABS.
Aug 1963 421 JB22
Alkyiation, Antimetaboiites, Cochliomyia hominivorax, Cochliomyia hominivorax (Coquerel), Sterilization.

347-67
OBSERVATIONS ON THE ROLE OF LIGHT, TEMPERATURE, AGE, AND SEX IN THE RESPONSE OF SCREW-WORM FLIES TO ATTRACTANTS.
M M Crystal
J Econ Entom 57(3):324-325
Jun 1964 421 JB22
Age, Attractants, Cochliomyia hominivorax, Cochliomyia hominivorax, Light, Sex, Temperature.

348-67
THE EFFECT OF PHYSIO-CHEMICAL TREATMENTS ON DIAPAUSING EGGS OF NORTHERN CORN ROOTWORMS, DIABROTICA LONGICORNIS.
V D Cunningham D C Peters
J Econ Entom 57(4):436-438

10 349-67

Aug 1964 421 JB22
Diabrotica longicornis, Diabrotica longicornis (Say), Experimental treatments, Insect egg hatching.

349-67
STUDIES OF SEX ATTRACTANT OF BANDED CUCUMBER BEETLE.
F P Cuthbert Jr W J Reid Jr
J Econ Entom S7(2):247-250, PL.
Apr 1964 421 JB22
Attractants, Diabrotica balteata, Diabrotica balteata.

350-67
UPTAKE OF METEPA AND ITS EFFECT ON TWO SPECIES OF MOSQUITOES (ANOPHELES QUADRIMACULATUS, AEDES AEGYPTI) AND HOUSE FLIES (MUSCA DOMESTICA).
D A Dame C H Schmidt
J Econ Entom S7(1):77-81, TABS.
Feb 1964 421 JB22
Aedes aegypti, Anopheles quadrimaculatus, Metepa, Musca domestica, Musca domestica.

351-67
CHOLINESTERASE VARIATION AS A FACTOR IN ORGANOPHOSPHATE SELECTIVITY IN INSECTS.
W C Dauterman R D O Brien
J Agr Food Ch 12(4):318-319, BIBL. 319
Jul 1964 3B1 JB223
Organophosphorus.

352-67
LIFE HISTORY AND HABITS OF THE GREEN SPRUCE LEAF MINER, EPINOTIA NANANA (TREITSCHKE) (LEPIDOPTERA: TORTRICIDAE).
L Daviault R Ducharme
Can Entom 98(7):693-699, TABS.
Jul 1966 421 C16
Epinotia nanana (Treitschke), Green spruce leaf miners, Insect behavior, Lepidoptera, Life cycle, Tortricidae.

353-67
A PIERIS BRASSICAE (LINNAEUS) CULTURE RESISTANT TO A GRANULOSIS.
W A L David B O C Gardiner
J Invertebrate Path 2(2):106-114, TABS.
1960 421 JB26
Granuloses, Pieris brassicae (Linnaeus).

354-67
BIOLOGY OF THE LEAFHOPPER DALBULUS MAIDIS AT SELECTED TEMPERATURES.
R Davis
J Econ Entom S9(3):766
Jun 1966 421 JB22
Biology, Dalbulus maidis.

355-67
REARING OF WOOLLY PINE NEEDLE APHID, SCHIZOLACHNUS PINIRADIATAE, VIVIPARAE.
A J DeLyzer
J Econ Entom S8(5):1021-1022
Oct 1965 421 JB22
Insect rearing, Schizolachnus pinipradiatae.

356-67
THE EFFECTS OF POSITION ON HATCHING OF HONEY BEE EGGS IN THE LABORATORY.
A Dietz
J Econ Entom S7(3):392-395
Jun 1964 421 JB22
Apis mellifera, Apis mellifera, Incubation, Insect rearing.

357-67
FACE FLY OVIPOSITION STUDIES.
R A Dilliough E S McClellan
J Econ Entom S8(4):716-719
Aug 1965 421 JB22
Musca autumnalis, Musca autumnalis DeGeer, Oviposition.

358-67
SOME EFFECTS OF IRRADIATION ON COCHLIOMYIA HOMINIVORAX.
E B Dixon
J Econ Entom S5(6):826-827
Dec 1962 421 JB22
Cochliomyia hominivorax (Coquerel), Irradiation.

359-67
EVIDENCE FOR A SEX ATTRACTANT IN FEMALES OF THE RED PINE SCALE.
C C Doane
J Econ Entom S9(6):1539-1540
Dec 1966 421 JB22
Matsucoccus resinosae, Red pine scale, Sex attractants.

360-67
STUDIES ON OVIPOSITION AND FECUNDITY OF CTENICERA DESTRUCTOR (BROWN) (COLEOPTERA:ELATERIDAE).
J F Doane
Can Entom 95(11):1145-1153
Nov 1963 421 C16
Coleoptera, Ctenicera destructor (Brown), Elateridae, Fertility, Oviposition.

361-67
OBSERVATIONS ON EMERGENCE AND LIFE-SPAN OF WHEAT BULB FLY, LEPTOHYLEMYIA COARCTATA (FALL.)
DITIONS.
R M Dobson M G Morrois
Bull Entomol R 51(4):803
Jan 1961 421 BB7
Emergence, Field-cage, Insect cages, Insect morphology, Leptohylemyia coarctata (Fall.), Life-span, Wheat.

362-67
STUDIES ON MOSQUITO LARVAE. I. LATER INSTARS OF EASTERN NORTH AMERICAN SPECIES.
H R Dodge
Can Entom 95(8):796-813, BIBL. 812-813
Aug 1963 421 C16
Culicidae, Larvae.

363-67
TRICHOGRAMMA MINUTUM AS A PARASITE OF THE CODLING MOTH AND RED-BANDED LEAF ROLLER.
R E Dolphin M L Cleveland
J Econ Entom S9(6):1525-1526
Dec 1966 421 J822
Argyrotaenia velutinana, Argyrotaenia velutinana, Carpocapsa pomonella, Parasitic insects, Trichogramma minutum.

364-67
FACE FLY CONTROL STUDIES IN WEST VIRGINIA IN 1960-1961.
C K Dorsey H E Kidder C J Cunningham
J Econ Entom S5(3):369-374, TABS.
Jun 1962 421 J822
Insect control, Insecticides, Musca autumnalis, Musca autumnalis.

365-67
ALFALFA WEEVIL CONTROL STUDIES IN WEST VIRGINIA.
C K Dorsey D O Quinn
J Econ Entom S5(3):365-368, TABS.
Jun 1962 421 JB22
Granules, Hypera postica, Hypera postica, Insect control, Spraying.

366-67
A SURVEY OF THE INCIDENCE OF NOSEMA DISEASE IN CALIFORNIA.
K M Doull J E Eckert
J Econ Entom S5(3):313-317, TABS.
Jun 1962 421 J822
Bees, Nosema disease, Queen bees.

367-67
BIOASSAY OF BACILLUS THURINGIENSIS-BASED MICROBIAL INSECTICIDES. III. CONTINUOUS PROPAGATION OF THE SALT-MARSH CATERPILLAR, ESTIGMENE ACREA.
P H Dunn I M Hall M L Snideman
J Econ Entom S7(3):374-377
Jun 1964 421 JB22
Bacillus thuringiensis, Biological assay, Estigmene acrea, Estigmene acrea, Insect rearing, Microbial insecticides.

368-67
MATING BEHAVIOR OF THE ORIENTAL FRUIT MOTH, GRAPHOLITHA MOLESTA (BUSCK) (LEPIDOPTERA: OLETHREUTIDAE).
G G Dustan
Can Entom 96(8):1087-1093, TABS.
Aug 1967 421 C16
Grapholitha molesta (Busck), Insect behavior, Lepidoptera, Olethreutidae.

369-67
STERILIZATION OF PINK BOLLWORM ADULTS WITH METEPA.
M T Duye
J Econ Entom S8(5):1018-1020
Oct 1965 421 JB22
Metepa, Pectinophora gossypiella, Sterilization.

370-67
INFLUENCE OF REPELLENCY ON THE EFFICACY OF 8LATTICIDES I. LEARNED MODIFICATIONS OF 8EHAVIOR OF THE GERMAN COCKROACH.
W Ebeling R E Wagner D A Reierson
J Econ Entom S9(6):1374-1388
Dec 1966 421 J822
8lattella germanica, 8lattella germanica, Insect behavior, Insect repellents.

371-67
GROWTH INHI8ITION OF THE HOUSE CRICKET WITH ETHYLENE.
L J Edwards
J Econ Entom S9(6):1S41-1S42
Dec 1966 421 J822
Acheta domesticus, Acheta domesticus, Ethylene, Insect growth inhibitors.

372-67
SUSCEPTI8ILITY TO ACARICIDES OF THE MITE TETRANYCHUS CINNA-8ARINUS INFESTING COTTON IN EGYPT.
M E Eldefrawi A H Hosny A Toppozada S Hassan
J Econ Entom S8(6):1106-1110, 8IBL. 1109-1110
Dec 196S 421 J822
Acaricides, Cotton, Mites, Tetranychus cinnabarinus.

373-67
INSECTICIDE EXPERIMENTS TO CONTROL GREEN PEACH APHID AND PEPPER WEEVIL ON PEPPERS.
J C Elmore R D Magor
J Econ Entom SS(3):37S-377
Jun 1962 421 J822
Anthonomus eugenii, Anthonomus eugenii, Insecticides, Myzus persicae, Myzus persicae, Redpeppers (vegetable).

374-67
A COMPARISON OF THE STEROLS IN RESISTANT AND SUSCEPTI8LE HOUSE FLIES, MUSCA DOMESTICA.
O Enan R Miskus R Graig
J Econ Entom 57(3):364-366
Jun 1964 421 J822
Insecticide resistant insects, Musca domestica, Musca domestica, Sterols.

375-67
DESCRIPTION AND LIFE HISTORY OF MELANOLOPHIA IMITATA (WALKER) (LEPIDOPTERA: GEOMETRIDAE.
D Evans
Can Entom 94(6):S94-605
Jun 1962 421 C16
Geometridae, Green-striped forest looper, Insect morphology, Lepidoptera, Life cycle, Melanolophia imitata (Walker).

376-67
FEEDING AND OVIPOSITION REACTION OF 8OLL WEEVILS TO COTTON, ALTHEA, AND OKRA FLOWER 8UDS.
T R Everett
J Econ Entom 57(1):165-166
Feb 1964 421 J822
Althea, Anthonomus grandis, Anthonomus grandis, Cotton, Insect behavior, Okra.

377-67
THE UTILITY OF SEALED PUNCTURES FOR STUDYING FECUNDITY AND EGG LAYING 8Y THE 8OLL WEEVIL.
T R Everett J O Ray
J Econ Entom S5(5):634-636
Oct 1962 421 J822
Anthonomus grandis, Anthonomus grandis 8oheman, Fertility, Oviposition.

378-67
PINE SAWFLY LARVAE, NEODIPRION EXCITANS, SURVIVE SU8FREEZ-ING TEMPERATURES IN FLORIDA.
C W Fatzinger
J Econ Entom 57(3):412-413
Jun 1964 421 J822
Diprionidae, Environment, Florida, Larvae, Neodiprion excitans.

379-67
SEASONAL ACTIVITY OF 8URIED OVERWINTERING PINK 8OLLWORM LARVAE IN CENTRAL TEXAS.
L C Fife H M Graham
J Econ Entom S8(4):688-690
Aug 1965 421 J822
Hibernation, Pectinophora gossypiella, Pectinophora gossypiella (Saunders), Texas.

380-67
THE FINAL-INSTAR LARVA OF 8RACON NUPERUS CRESS. (HYMENOP-TERA : 8RACONIDAE).
T Finlayson
Can Entom 96(11):1470
Nov 1964 421 C16
8racon nuperus Cress., 8raconidae, Hymenoptera, Larvae.

381-67
THE EFFECTS OF GAMMA RADIATION ON MATING COMPETITIVENESS AND FECUNDITY OF HIPPELATES PUSIO LOEW.
H M Flint
J Econ Entom S9(1):96-99
Feb 1966 421 J822
Fertility, Gamma rays, Hippelates pusio Loew, Mating habits.

382-67
COMPETITION 8ETWEEN TWO SPECIES OF MITES. I. EXPERIMENTAL RESULTS.
W H Foott
Can Entom 94(4):365-375
Apr 1962 421 C16
Insect competition, Panonychus ulmi, Panonychus ulmi (Koch), Tetranychus telarius (L.), Tetranychus urticae.

383-67
FAILURE OF MYO-INOSITOL TO PREVENT THE GROWTH-INHI8ITING EF-FECTS OF LINDANE IN PERIPLANETA AMERICANA.
A J Forgash
J Econ Entom 5S(3):308-312
Jun 1962 421 J822
Diet, Inositol, Lindane, Periplaneta americana, Periplaneta americana.

384-67
COLOR PREFERENCE OF THE HORN FLY, HAEMATO8IA IRRITANS, ON 8EEF CATTLE.
R F Franks E C 8urns N C England
J Econ Entom 57(3):371-372
Jun 1964 421 J822
8eef cattle, Color preference, Haematobia irritans, Haematobia irritans.

386-67
STUDIES IN MOSQUITO REPELLENCY. III. FLIGHT POSTURE.
D E Frizel R H Wright
Can Entom 94(S):493-496
May 1962 421 C16
Culicidae, Insect flight, Insect repellents.

387-67
COMPOUNDS CAUSING STERILITY IN ADULT HOUSE FLIES.
R L Fye H K Gouck G C La8recque
J Econ Entom 58(3):446-448
Jun 196S 421 J822
Chemosterilants, Musca domestica, Musca domestica L.

388-67
SEXUAL ACCEPTA8ILITY OF LA8ORATORY STRAINS OF MALE HOUSE FLIES IN COMPETITION WITH WILD STRAINS.
R L Fye G C La8reque
J Econ Entom S9(3):538-540
Jun 1966 421 J822
Competition, Laboratory insects, Musca domestica, Musca domestica, Wild insects.

389-67
A SPRAY TECHNIQUE FOR IMPLANTING 8OLL WEEVIL EGGS ON ARTIFICIAL DIETS.
R T Gast
J Econ Entom 59(1):239-240
Feb 1966 421 J822
Anthonomus grandis, Anthonomus grandis (8oheman), Artificial diets, Implantation, Insect eggs, Spraying.

390-67
THE EFFECTS OF DIFFERENT PLANT FOODS ON THE FECUNDITY, FER-TILITY, AND DEVELOPMENT OF A COTTON STAINER, DYSDERCUS SUPERSTITIOSUS (F.).
Q A Gegering T H Coaker
8ull Entomol R S1(1):61-76
Apr 1960 421 887
Cotton, Dysdercus superstitiosus (F), Fertility, Insect eggs, Insect morphology, Plant foods.

391-67
IMMATURE STAGES OF WESTERN CORN ROOTWORM.
8 W George A M Hintz
J Econ Entom 59(5):1139-1142

Oct 1966 421 JB22
Diabrotica virgifera, Diabrotica virgifera LeConte, Larvae, Pupae.

392-67
FIELD AND LABORATORY REPELLENCY TESTS WITH 2,2,4-TRIMETHYL-I,3-PENTANEDIOL (TMPD). .
E J Gerberg
J Econ Entom S9(4):B72-B75, TABS.
Aug 1966 421 JB22
Aedes taeniorynchus, Amblyomma americanum, Anopheles freeborni, Culex sp., Eutrombicula alfreddugesi, Leptoconops bequaerti, Repellency tests, Thiram, Xenopsylla cheopis, 2,2,4-trimethyl-1,3-pentanediol.

393-67
STUDIES WITH WHITEFLY PARASITES OF SOUTHERN CALIFORNIA. I. ENCARSIA PEGANDIELLA HOWARD (HYMENOPTERA: APHELINIDAE).
D Gerling
Can Entom 9B(7):707-724, BIBL. TABS.
Jul I966 421 C16
Aphelinidae, Encarsia pergandiella Howard, Hymenoptera, Parasitic insects, Southern California, Whitefly.

394-67
N-ALKYL TOLUAMIDES IN CLOTH AS REPELLENTS FOR MOSQUITOES, TICKS, AND CHIGGERS.
S I Gertler H K Gouck I H Gilbert
J Econ Entom 5S(4):451-452
Aug 1962 42I JB22
Culicidae, Culicidae, Insect repellents, Ixodides, Ixodides, N-alkyl toluamides, Trombiculidae, Trombiculidae.

395-67
GONIOZUS INDICUS AS A PARASITE OF THE SUGARCANE BORER.
J R Gifford
J Econ Entom 5B(4):799-B00
Aug 1965 421 JB22
Diatraea saccharalis, Goniozus indicus Muesebeck, Parasitism.

396-67
PRELIMINARY FIELD EVALUATION OF A NONINCLUSION VIRUS FOR CONTROL OF THE CITRUS RED MITE.
J E Gilmore
J Econ Entom 5B(6):1136-1I40, TABS.
Dec 1965 421 JB22
Panonychus citri, Panonychus citri (McGregor), Viruses.

397-67
SEASONAL VARIATIONS IN THE FAT CONTENT AND SIZE OF GLOSSINA SWYNNERTONI AUSTEN.
J P Glasgow E Burseli
Bull Entomol R S1(4):70S-713
Jan 1961 421 BB7
Fats, Glossina swynnertoni Austen, Insect size, Seasonal variation.

39B-67
A PRE-DIAPAUSE ARRESTED DEVELOPMENT PERIOD IN THE RED-BANDED LEAF ROLLER, ARGYROTAENIA VELUTINANA.
E H Glass
J Econ Entom S6(5):634-635
Oct 1963 421 JB22
Argyrotaenia velutinana, Argyrotaenia velutinana (Walker), Diapause, Insect morphology.

399-67
A FIELD EXPERIMENT WITH APHOLATE AS A CHEMOSTERILANT FOR THE CONTROL OF HOUSE FLIES.
H K Gouck D W Meifert J B Gahan
J Econ Entom 56(4):445-446
Aug 1963 421 JB22
Apholate, Chemosterilants, Musca domestica.

400-67
CHEMOSTERILIZATION OF HOUSE FLIES BY TREATMENT IN THE PUPAL STAGE.
H K Gouck
J Econ Entom S7(2):239-24I
Apr 1964 421 JB22
Chemosterilants, Musca domestica, Musca domestica, Pupae.

401-67
A COMPARISON OF TECHNIQUES FOR SCREENING CHEMOSTERILANTS OF HOUSE FLIES AND SCREW-WORM FLIES.
H K Gouck M M Crystal A B Borkovec D W Meifert
J Econ Entom S6(4):S06-S09, TABS.
Aug I963 421 JB22
Chemosterilants, Cochliomyia hominivorax, Cochliomyia hominivorax (Coquerel), Musca domestica, Musca domestica L..

402-67
CONTROL OF PINK BOLLWORMS BY MALE ANNIHILATION.
H M Graham D F Martin M T Ouye R M Hardman
J Econ Entom 59(4):950-953, TABS.
Aug 1966 421 JB22
Male annihilation, Pectinophora gossypiella.

403-67
THE REPRODUCTIVE CAPACITY OF FEMALE BOOPHILUS ANNULATUS COLLECTED FROM CATTLE DIPPED IN ARSENIC OR COUMAPHOS.
O H Graham R O Drummond G Diamant
J Econ Entom S7(3):409-410
Jun 1964 421 JB22
Arsenic, Boophilus annulatus, Cattle, Coumaphos, Reproduction.

404-67
LABORATORY SCREENING OF INSECTICIDES FOR THE PREVENTION OF REPRODUCTION OF BOOPHILUS TICKS.
O H Graham R O Drummond
J Econ Entom S7(3):335-339
Jun 1964 421 JB22
Boophilus annulatus, Boophilus annulatus microplus, Insecticides, Reproduction.

405-67
STATUS OF BOLL WEEVIL RESISTANCE TO INSECTICIDES IN LOUISIANA DURING 1961.
J B Graves J S Roussel
J Econ Entom SS(6):93B-940, TABS.
Dec 1962 421 JB22
Anthonomus grandis, Anthonomus grandis, Insecticide resistant insects, Insecticides.

406-67
TOPICAL APPLICATION AND INSECTICIDE RESISTANCE STUDIES ON THE HONEY BEE.
J B Graves O Mackensen
J Econ Entom SB(5):990-993
Oct 196S 421 JB22
Apis mellifera, Insecticide application.

407-67
LOW WINTER TEMPERATURES AND THE EUROPEAN PINE SHOOT MOTH, RHYACIONIA BUOLIANA (SCHIFF.) IN ONTARIO.
G W Green
Can Entom 94(3):314-336
Mar 1962 421 C16
Environment, Insect temperature, Rhyacionia buoliana, Rhyacionia buoliana (Schiff.).

408-67
ON THE BIOLOGY OF THE IMPORTED FIRE ANT.
H B Green
J Econ Entom 55(6):1003-1004
Dec 1962 421 JB22
Biology, Solenopsis saevissima richteri, Solenopsis saevissima richteri.

409-67
FIELD POPULATIONS ON THREE GRAIN APHID SPECIES IN WESTERN OREGON.
G L Greene
J Econ Entom 59(5):1201-1206
Oct 1966 421 JB22
Acyrthosiphon dirhodum (Walker), Bariey, Insect population, Macrosiphum avenae (F.), Oregon, Rhopalosiphum padi (L.), Schizaphis graminum.

410-67
OVIPOSITIONAL HABITS OF THE RICE WATER WEEVIL CALIFORNIA AS RELATED TO A GREENHOUSE EVALUATION OF SEED TREATMENTS.
A A Grigarick G W Beards
J Econ Entom 5B(6):1053-1056, TABS.
Dec 1965 421 JB22
California, Lissorhoptrus oryzophilus, Oviposition, Seed treatment.

411-67
THE FUNGUS EMPUSA APHIDIS HOFFMAN PARASITIC ON THE WOOLY PINE NEEDLE APHID, SCHIZOLACHNUS PINI-RADIATAE (DAVIDSON).
J H Grobler D M MacLeod A J DeLyzer
Can Entom 94(1):46-49
Jan 1962 421 CI6
Empusa aphidis Hoffman, Fungi, Parasitism, Schizolachnus pini-radiatae (Davidson),

Woolly pine needle aphid.

412-67
THE BIOLOGY AND CONTROL OF THE WESTERN BEAN CUTWORM IN DENT CORN IN NEBRASKA.
A F Hagen
J Econ Entom 55(5):628-631
Oct 1962 421 JB22
Corn, Insect biology, Loxagrotis albicosta, Loxagrotis albicosta (Smith), Nebraska.

413-67
ATTEMPTED PROPAGATION OF NASONIA VITRIPENNIS ON THE FACE FLY.
J A Hair E C Turner Jr
J Econ Entom 58(1):159-160
Feb 1965 421 JB22
Musca autumnalis, Musca autumnalis DeGeer, Nasonia vitripennis, Parasitism.

414-67
HESSIAN FLY LARVAL STRAIN RESPONSES TO SIMULATED WEATHER CONDITIONS IN THE GREENHOUSE AND LABORATORY.
E W Hamilton
J Econ Entom 59(3):535-538
Jun 1966 421 JB22
Larvae, Mayetiola destructor, Mayetiola destructor, Weather.

415-67
REDUCTION IN REPRODUCTIVE CAPACITY OF EUROPEAN RED MITE BY NIAGARA 9203.
E O Hamstead
J Econ Entom 59(2):481
Apr 1966 421 J822
Niagara 9203, Panonychus ulmi, Panonychus ulmi (Koch), Reproduction.

416-67
EFFECTS OF APHOLATE ON RESTRICTED POPULATIONS OF INSECTICIDE -RESISTANT HOUSE FLIES, MUSCA DOMESTICA.
E J Hansens
J Econ Entom 58(5):944-946
Oct 1965 421 J822
Aphoiate, Musca domestica.

417-67
PARASITISM OF THE LEAF MINER LIRIOMYZA MUNDA IN THE WINTER GARDEN AREA OF TEXAS.
J A Harding
J Econ Entom 58(3):442-443
Jun 1965 421 JB22
Leaf miners, Liriomyza munda Frick, Parasitism, Texas.

418-67
REARING THE HORN FLY, HAEMATOBIA IRRITANS.
L T Hargett R L Goulding
J Econ Entom 55(4):565-566
Aug 1962 421 J822
Haematobia irritans, Haematobia irritans (L.), Insect rearing.

419-67
SUGAR-BEET ROOT APHID, PEMPHIGUS BETAE DOANE (HOMOPTERA: APHIDIDAE), IN SOUTHERN ALBERTA.
A M Harper
Can Entom 95(8):863-873, BIBL. 872-873, TABS.
Aug 1963 421 C16
Alberta, Aphididae, Homoptera, Pemphigus betae, Pemphigus populivenae.

420-67
INSECTICIDE TESTS ON THE CORN EARWORM AS A PEST OF LETTUCE IN ARIZONA.
F H Harries A C Valcarce
J Econ Entom 55(1):112-115, TABS.
Feb 1962 421 JB22
Heliothis zea, Heliothis zea, Insecticides, Lettuce, Pest control.

421-67
EFFECTS OF SOME ANTIBIOTICS AND OTHER COMPOUNDS ON FERTILITY AND MORTALITY OF ORCHARD MITES.
F H Harries
J Econ Entom 56(4):438-441, TABS
Aug 1963 421 J822
Antibiotics, Fertility, Mites, Mortality, Panonychus ulmi (Koch), Tetranychus telarius L..

422-67
INSECTICIDE RESISTANCE IN THE PEAR PSYLLA.
F H Harries E C Burts
J Econ Entom 58(1):172-173
Feb 1965 421 JB22
Insecticide resistant insects, Psylla pyricola, Psylla pyricola Forster.

423-67
CONTROL OF A CORN STEM WEEVIL (HYPERODES HUMILIS), AND FALL ARMYWORM WITH DDT AND PARATHION IN SOUTH FLORIDA.
E D Harris Jr
J Econ Entom 55(1):83-85, TABS.
Feb 1962 421 J822
Corn stem weevil, DDT , Hyperodes humilis, Insect control, Parathion, Spodoptera frugiperda, Spodoptera frugiperda.

424-67
MASS REARING OF THE CABBAGE MAGGOT UNDER CONTROLLED ENVIRONMENTAL CONDITIONS, WITH OBSERVATIONS ON THE BIOLOGY OF CYCLODIENE-SUSCEPTIBLE AND RESISTING STRAINS.
C R Harris H J Svec
J Econ Entom 59(3):569-573
Jun 1966 421 JB22
Controlled environment, Cyclodiene, Hylemya brassicae, Hylemya brassicae, Insect biology, Insect rearing techniques, Resistance, Susceptibility.

425-67
CHEMICAL INDUCTION OF STERILITY IN THE STABLE FLY.
R L Harris
J Econ Entom 55(6):882-885, TABS.
Dec 1962 421 JB22
Chemosterilants, Stomoxys calcitrans, Stomoxys calcitrans.

426-67
MATING HABITS OF THE STABLE FLY.
R L Harris E D Frazer P D Grossman O H Graham
J Econ Entom 59(3):634-636
Jun 1966 421 JB22
Mating habits, Stomoxys calcitrans, Stomoxys calcitrans.

427-67
LABORATORY TESTS TO DETERMINE SUSCEPTIBILITY OF ADULT HORN FLY AND STABLE FLY TO INSECTICIDES.
R L Harris
J Econ Entom 57(4):492-494
Aug 1964 421 J822
Haematobia irritans, Haematobia irritans (L.), Insecticides, Stomoxys calcitrans, Stomoxys calcitrans (L.).

428-67
RESISTANCE TO RONNEL IN A STRAIN OF HORN FLIES.
R L Harris E D Frazar O H Graham
J Econ Entom 59(2):387-390
Apr 1966 421 J822
Adults, Backrubbers, Haematobia irritans, Haematobia irritans (L.), Insecticides, Ronnel.

429-67
EFFECTS OF TEPA ON REPRODUCTION OF CODLING MOTHS.
D O Hathaway L V Lydin B A Butt
J Econ Entom 59(4):851-853
Aug 1966 421 J822
Carpocapsa pomonella, Reproduction, Tepa.

430-67
HEMPA AND APHOLATE AS CHEMOSTERILANTS FOR THE BOLL WEEVIL.
J W Haynes P A Hedin T B Davich
J Econ Entom 59(4):1014-1015, TABS.
Aug 1966 421 J822
Anthonomus grandis, Anthonomus grandis, Aphoiate, Chemosterilants, Hempa.

431-67
A COMPARATIVE STUDY OF CERTAIN BIOLOGICAL PHENOMENA DETECTED IN A PARATHION-TREATED STRAIN AND A SUSCEPTIBLE STRAIN OF THE PLUM CURCULIO, CONOTRACHELUS NENUPHAR.
S B Hays J H Cochran
J Econ Entom 56(6):810-813, BIBL. 813, TABS.
Dec 1963 421 J822
Conotracheius nenuphar, Conotrachelus nenuphar (Herbst), Insect biology, Insecticide resistant insects, Parathion.

432-67
EVALUATION OF COMPOUNDS AFFECTING THE REPRODUCTIVE POTENTIAL OF THE PLUM CURCULIO.
S B Hays J H Cochran
J Econ Entom 57(2):217-219, TABS.
Apr 1964 421 J822

10 433-67

Chemosterilants, Conotrachelus nenuphar,
Conotrachelus nenuphar (Herbst).

433-67
ANTIFERTILITY EFFECT OF THE CHEMOSTERILANT APHOLATE ON THE MALE BOLL WEEVIL.
P A Hedin C P Cody A C Thompson Jr
J Econ Entom 57(2):270-272, TABS.
Apr 1964 421 J822
Anthonomus grandis, Anthonomus grandis, Apholate, Chemosterilants, Fertility.

434-67
PUPAL SIZE AND MORTALITY, LONGEVITY, AND REPRODUCTION OF CABBAGE LOOPERS REARED AT SEVERAL DENSITIES.
T J Henneberry A N Kishaba
J Econ Entom 59(6):1490-1493
Dec 1966 421 J822
Insect rearing, Insect reproduction, Pupae, Trichoplusia ni.

435-67
EFFECT OF HOST PLANT CONDITION AND FERTILIZATION ON TWO-SPOTTED SPIDER MITE FECUNDITY.
T J Henneberry
J Econ Entom 56(4):503-505, TABS.
Aug 1963 421 JB22
Fertility, Fertilization (plants), Plant hosts, Tetranychus telarius (L.), Tetranychus urticae.

436-67
SOME EFFECTS OF GAMMA RADIATION ON FERTILITY OF DROSOPHILA MELANOGASTER AND VIABILITY OF SPERM AFTER MULTIPLE MATINGS OF MALES.
T J Henneberry W L McGovern
J Econ Entom 56(6):819-822, BIBL. 822, TABS.
Dec 1963 421 JB22
Drosophila melanogaster Meigen, Fertility, Gamma rays, Irradiation, Sex behavior, Spermatozoa.

437-67
EFFECTS OF GAMMA RADIATION ON MATING COMPETITIVENESS AND BEHAVIOR OF DROSOPHILA MELANOGASTER MALES.
T J Henneberry W L McGovern
J Econ Entom 56(6):739-741, BIBL. 740-741, TABS.
Dec 1963 421 JB22
Drosophila melanogaster Meigen, Gamma rays, Irradiation, Sex behavior.

438-67
EFFECTIVENESS OF INSECTICIDES IN SOIL AGAINST TERMITES AFTER 15 YEARS.
L A Hetrick
J Econ Entom 55(2):270-271
Apr 1962 421 JB22
Insect control, Insecticides, Soils, Termites.

439-67
TRANSMISSION OF SACBROOD DISEASE TO INDIVIDUAL HONEY BEE LARVAE.
J D Hitchcock
J Econ Entom 59(5):1154-1156
Oct 1966 421 J822
Apis mellifera, Apis mellifera L., Larvae, Sacbrood.

440-67
FURTHER STUDIES ON THE FOOD-GATHERING BEHAVIOUR OF BUMBLE BEES (HYMENOPTERA: APIDAE).
G A Hobbs
Can Entom 94(5):538-541
May 1962 421 C16
Apidae, Bombus, Food habits, Hymenoptera, Insect behavior.

441-67
PRELIMINARY STUDIES ON MASS REARING OF THE TOBACCO HORNWORM.
J D Hoffman F R Lawson
J Econ Entom 57(3):354-355
Jun 1964 421 J822
Insect rearing, Manduca quinquemaculata, Protoparce sexta.

442-67
SPECTRAL RESPONSE CHARACTERISTICS OF THE BOLL WEEVIL.
J P Hollingsworth R L Wright D A Lindquist
J Econ Entom 57(1):38-41
Feb 1964 421 J822
Anthonomus grandis, Anthonomus grandis, Spectroscopy.

443-67
THE MECHANISM OF DDT RESISTANCE IN THE SPOTTED ROOT MAGGOT EUXESTA NOTATA.
G H S Hooper
J Econ Entom 58(4):608-611, BIBL. 610-611, TABS.
Aug 1965 421 JB22
Euxesta notata (Weidemann), Insecticide resistant insects, DDT , Spotted root maggot.

444-67
EFFECTS OF 300 KV X-RAY RADIATION ON SITOPHILUS ORYZAE.
D L Hoover E H Floyd H D Richardson
J Econ Entom 56(5):584-586, TABS.
Oct 1963 421 J822
Irradiation, Sitophilus oryzae (L.), X-rays.

445-67
ANTICHOLINESTERASES IN BLOOD AND CATTLE GRUBS FROM CATTLE TREATED WITH RONNEL.
T L Hopkins F W Knapp
J Econ Entom 56(6):872-874
Dec 1963 421 JB22
Blood, Cattle, Cholinesterases, Hypoderma, Hypoderma, Ronnel.

446-67
IN VIVO OXIDATION OF RONNEL IN THE MADEIRIA COCKROACH.
T L Hopkins
J Econ Entom 55(3):334-336
Jun 1962 421 JB22
Leucophaea maderae, Leucophaea maderae, Oxidation, Ronnel.

447-67
EFFECTS OF GAMMA RADIATION ON CODLING MOTH EGGS.
W S Hough
J Econ Entom 56(5):660-663, TABS.
Oct 1963 421 JB22
Carpocapsa pomonella, Carpocapsa pomonella (L.), Gamma rays, Insect eggs, Irradiation.

448-67
EGG MORTALITY AFTER GAMMA IRRADIATION OF ADULTS OF THE OMNIVOROUS LEAF ROLLER.
S W Jacklin F F Smith A L Boswell
J Econ Entom 58(6):1168-1169
Dec 1965 421 J822
Insect eggs, Irradiation, Omnivorous leaf roller, Platynota stultana (Walsingham).

449-67
BIOLOGICAL OBSERVATIONS ON THE EUROPEAN CORN BORER IN SOUTHEASTERN MISSOURI.
R D Jackson D C Peters
J Econ Entom 56(67):741-747, BIBL. 747, TABS.
Dec 1963 421 JB22
Insect biology, Missouri, Ostrinia nubilalis, Ostrinia nubilalis (Huebner).

450-67
CHEMICAL CONTROL OF THE PALE WESTERN CUTWORM INFESTING WHEAT IN ALBERTA, CANADA.
L A Jacobsen S McDonald
J Econ Entom 59(4):965-967 TABS.
Aug 1966 421 JB22
Agrotis orthogonia, Agrotis orthogonia, Alberta, Chemical control (insects), Wheat.

451-67
DIAPAUSE IN EGGS OF THE PALE WESTERN CUTWORM AGROTIS ORTHOGONIA MORR. (LEPIDOPTERA: NOCTUIDAE).
L A Jacobson
Can Entom 94(5):515-522
May 1962 421 C16
Agrotis orthogonia, Agrotis orthogonia Morr., Diapause, Insect eggs, Lepidoptera, Noctuidae.

452-67
DETERMINATION OF SEX OF THE DOUGLAS-FIR BEETLE DENDROCTONUS PSEUDOTSUGAE HOPKINS (COLEOPTERA: SCOLYTIDAE).
O K Jantz R L Johnsey
Can Entom 96(10):1327-1329
Oct 1964 421 C16
Coleoptera, Dendroctonus pseudotsugae Hopkins, Scolytidae, Sex determination.

453-67
EFFECT ON HONEY BEES OF NECTAR FROM SYSTEMIC INSECTICIDE-TREATED PLANTS.
E R Jaycox
J Econ Entom 57(1):31-35, BIBL. 35, TABS.
Feb 1964 421 JB22
Apis mellifera, Apis mellifera, Nectar, Systemic insecticides.

454-67
A DESCRIPTION OF TERRITORIAL 8EHAVIOR AND A QUANTITATIVE STUDY OF ITS FUNCTION IN MALES OF HETAERINA AMERICANA (FA8RICIUS) (ODONATA: AGRIIDAE).
C Johnson
Can Entom 94(2):178-190
Feb 1962 421 C16
Agriidae, Hetaerina americana (Fabricus), Insect behavior, Odonata, Odonata, Sex behavior, Territoriality.

455-67
IMMATURE STAGES AND 8IOLOGY OF APATETICUS CYNICUS (SAY) (HEMIPTERA: PENTATOMIDAE).
P A Jones H C Coppel
Can Entom 95(7):770-779, 8I8L. 778-779
Jul 1963 421 C16
Apateticus cynicus, Hemiptera, Nymphs, Pentatomidae.

456-67
COLLECTION OF ADDITIONAL SEX ATTRACTANT FROM THE VIRGIN FEMALE INTRODUCED PINE SAWFLY.
P A Jones H C Coppel J E Casida
J Econ Entom 58(3):465-466
Jun 1965 421 J822
Attractants, Diprion similis, Diprion similis (Hartig), Insect collecting equipment.

457-67
AMINO ACID REQUIREMENTS FOR THE WHEAT STEM SAWFLY DETERMINED WITH GLUCOSE-U-C14 AFTER VACUUM-INFILTRATION.
R Kasting A J McGinnis
Can Entom 96(8):1133-1137
Aug 1964 421 C16
Amino acids, Cephus cinctus Nort., Glucose-U-C14, Vacuum-infiltration, Wheat.

458-67
QUANTITIVE RELATIONSHIP 8ETWEEN CONSUMPTION AND EXCRETION OF DRY MATTER 8Y LARVAE OF THE PALE WESTERN CUTWORM, AGROTIS ORTHOGONIA MORR. (LEPIDOPTERA: NOCTUIDAE).
R Kasting A J McGinnis
Can Entom 94(4):441-443
Apr 1962 421 C16
Agrotis orthogonia, Agrotis orthogonia Morr., Consumption, Excreta, Larvae, Lepidoptera, Noctuidae.

459-67
PARASITES ASSOCIATED WITH THE RED-PINE NEEDLE MIDGE THECODIPLOSIS PINIRESINOSAE KEAR8Y.
W H Kearby D M 8enjamin
J Econ Entom 58(1):166-168
Feb 1965 421 J822
Parasitism, Red-pine needle midge, Thecodiplosis piniresinosae Kearby.

460-67
COTTON EXTRACTS AS ARRESTANTS AND FEEDING STIMULANTS FOR THE 8OLL WEEVIL.
J C Keller F G Maxwell J N Jenkins
J Econ Entom 55(5):800-801
Oct 1962 421 J822
Anthonomus grandis, Anthonomus grandis 8oheman, Cotton, Feeding, Plant extracts.

461-67
THE ACUTE ORAL TOXICITIES OF SOME INSECTICIDES TO AMERICAN COCKROACHES.
J C Keller T T Liang
J Econ Entom 55(1):144-145
Feb 1962 421 J822
Insecticides, Periplaneta americana, Periplaneta americana, Toxicology.

462-67
EXTRACTION OF A 8OLL WEEVIL ATTRACTANT FROM THE SURROUNDING GROWING COTTON.
J C Keller T 8 Davich F G Maxwell J N Jenkins E 8 Mitchell
J Econ Entom 58(3):588-589
Jun 1965 421 J822
Anthonomus grandis, Anthonomus grandis 8oheman, Attractants, Cotton, Plant extracts.

463-67
INSECTICIDE TESTS AGAINST GYPSY MOTH LARVAE.
J C Keller E C Paszek A R Hastings V A Johnson
J Econ Entom 55(1):102-105
Feb 1962 421 J822
Insecticides, Larvae, Porthetria dispar, Porthetria dispar.

464-67
RESPONSE OF FIVE SPECIES OF INSECTS TO WATER EXTRACTS OF THEIR HOST PLANTS.
J C Keller T 8 Davich
J Econ Entom 58(1):164-165
Feb 1965 421 J822
Anthonomus grandis 8oheman, Feeding, Plant extracts, Plant hosts.

465-67
THE OLFACTORY GUIDANCE OF FLYING INSECTS. III. A TECHNIQUE FOR O8SERVING AND RECORDING FLIGHT PATHS.
F E Kellogg R H Wright
Can Entom 94(5):486-
May 1962 421 C16
Insect flight, Insect olfactory sense.

466-67
QUANTITATION OF EFFECT OF SEVERAL STIMULI ON LANDING AND PRO8ING 8Y AEDES AEGYPTI.
A A Khan H I Maibach
J Econ Entom 59(3):902-905, TA8S.
Aug 1966 421 J822
Aedes aegypti, Culicidae, Stimuli.

467-67
SOME ENVIRONMENTAL FACTORS INFLUENCING OVIPOSITION 8Y THE POTATO LEAFHOPPER, EMPOASCA FA8AE.
R W Kieckhefer J T Medler
J Econ Entom 57(4):482-484
Aug 1964 421 J822
Empoasca fabae, Empoasca fabae, Environment, Oviposition.

468-67
THE EFFECTS OF 5-FLUOROURACIL ON THE VIA8ILITY OF HOUSE FLY EGGS.
W W Kilgore R 8 Painter
J Econ Entom 55(5):710-712
Oct 1962 421 J822
Insect eggs, Musca domestica, Musca domestica L, 5-fluorouracil.

469-67
INSECT CHEMOSTERILANTS: INCORPORATION OF 5-FLUOROURACIL INTO HOUSE FLY EGGS.
W W Kilgore R R Painter
J Econ Entom 59(3):746-747
Jun 1966 421 J822
Chemosterilants, Eggs, Insects, Musca domestica, Musca domestica, 5-fluorouracil.

470-67
MATING AND OVIPOSITION STUDIES OF THE STA8LE FLY.
R A Killough D M McKinstry
J Econ Entom 58(3):489-491
Jun 1965 421 J822
Oviposition, Sex behavior, Stomoxys calcitrans, Stomoxys calcitrans (L.).

471-67
FACE FLY DISPERSAL, NOCTURNAL RESTING PLACES, AND ACTIVITY DURING SUNSET AS O8SERVED IN 1963.
R A Killough J G Hartsock W W Wolf J W Smith
J Econ Entom 58(4):711-715
Aug 1965 421 J822
Insect behavior, Insect dissemination, Musca autumnalis, Musca autumnalis DeGeer.

473-67
INHI8ITION OF REPRODUCTION OF INDIAN MEAL-MOTHS, PLODIA INTERPUNCTELLA, 8Y EXPOSURE TO AMPLIFIED SOUND.
R L Kirkpatrick Phillip K Harein
J Econ Entom 58(5):920-921
Oct 1965 421 J822
Moths, Plodia interpunctella, Reproduction, Sound waves.

474-67
SU8STANCES INHI8ITORY TO INSECT FEEDING WITH INSECTICIDAL PROPERTIES FROM FUNGI.
A N Kishaba D L Shankland R W Curtis M C Wilson
J Econ Entom 55(2):211-214
Apr 1962 421 J822
Feeding, Fungi, Insecticides, Insects.

475-67
EFFECTS OF COLD STORAGE ON EGG VIA8ILITY OF THE CA88AGE LOOPER AND SOME ASPECTS OF THE 8IOLOGY OF THE PROGENY SURVIVORS.
A N Kishaba T J Henneberry
J Econ Entom 59(5):1161-1171

10 476-67

Oct 1966 421 JB22
Biology, Cold storage, Embryogenesis, Insect eggs,
Trichoplusia ni, Trichoplusia ni (Hubner).

476-67
NON-PREFERENCE AS A MECHANISM OF SWEETCLOVER AND ALFALFA RESISTANCE TO THE SWEETCLOVER APHID AND THE SPOTTED ALFALFA APHID.
A N Kishaba G R Manglitz
J Econ Entom SB(3):S66-S69, BIBL., TABS.
Jun 1967 421 J822
Alfalfa, Insecticide resistant insects, Sweetclover,
Therioaphis maculata, Therioaphis maculata (Buckton),
Therioaphis riehmi, Therioaphis riehmi (Borner).

477-67
MORTALITY AND FERTILITY RESPONSE OF MUSCA DOMESTICA ADULTS TO CERTAIN KNOWN MUTAGENIC OR ANTI-TUMOR AGENTS.
J B Kissam S B Hays
J Econ Entom S9(3):748-749
Jun 1966 421 JB22
Adults, Anti-tumor agents, Fertility, Mortality,
Musca domestica, Mutagenic agents.

478-67
CHOLESTEROL ANALOG UTILIZATION BY GRASSHOPPERS.
J B Kreasky
J Econ Entom SB(5):1015-1016
Oct 1965 421 JB22
Cholesterol, Grasshoppers, Melanoplus bivittatus.

479-67
A VIRUS DISEASE OF COLEOPTEROUS INSECTS.
A Krieg A Huger
J Invertebrate Path 2(3):274-288
1960 421 J826
Coleoptera, Moratorvirus iameillcornium, Viruses.

480-67
THE FRACTIONATION AND SOLUBILIZATION OF PRODENIA ERIDANIA CHITIN SYNTHETASE.
H R Krueger E G Jaworski
J Econ Entom 59(1):229-230
Feb 1966 421 J822
Chitin synthetase., Fractionation,
Prodenia eridania (Cramer), Solubilization.

481-67
SEROLOGICAL RELATIONSHIPS BETWEEN INSECT VIRUSES AND THEIR INCLUSION-BODY PROTEINS.
J Krywienczyk G H Bergold
J Invertebrate Path 2(2):118-123, TABS.
1960 421 JB26
Granuloses, Inclusion bodies, Polyhedroses,
Serological tests.

482-67
A SEROLOGICAL COMPARISON OF THE PARASPORAL BODIES OF THREE INSECT PATHOGENS.
J Krywienczyk T A Angus
J Invertebrate Path 2(4):411-417
1960 421 J826
Bacillus entomocidus var. entomocidus Helmpei and Angus,
Bacillus thuringiensis var. sotto Aoki and Chigasaki,
Bacillus thuringiensis var. thuringiensis Berliner, Spores.

483-67
DOSAGES OF NUCLEAR-POLYHEDROSIS VIRUS EFFECTIVE AGAINST MALACOSOMA DISSTRIA WITH NOTES ON INTERSPECIES SUSCEPTIBILITY.
H M Kuiman M A Brooks
J Econ Entom SB(5):1008-1010
Oct 1965 421 JB22
Dosage, Malacosoma disstria, Polyhedroses,
Virile susceptibility.

484-67
THE STATUS OF TIPHIA VERNALIS ROHWER, A PARASITE OF THE JAPANESE BEETLE, IN SOUTHERN NEW JERSEY AND SOUTHEASTERN PENNSYLVANIA IN 1963.
T L Ladd Jr P J McCabe
J Econ Entom 59(2):480, BIBL.
Apr 1966 421 JB22
Insect hosts, Larvae, New Jersey, Parasitism, Pennsylvania,
Popillia japonica, Popillia japonica Newman,
Tiphia vernalis Rohwer.

485-67
EGG VIABILITY AND LONGEVITY OF JAPANESE BEETLES TREATED WITH TEPA, APHOLATE, AND METEPA.
T L Ladd Jr
J Econ Entom 59(2):422-425
Apr 1966 421 J822
Apholate, Metepa, Popillia japonica,
Popillia japonica Newman, Tepa.

486-67
OLFACTORY AND OVIPOSITION RESPONSES OF THE HOUSE FLY TO DOMESTIC MANURES, WITH NOTES ON AN AUTOGENOUS STRAIN.
J R Larsen R E Peadt L G Peterson
J Econ Entom 59(3):610-615
Jun 1966 421 JB22
Autogenous strain, Domestic manures, Musca domestica,
Musca domestica, Olfactory responses, Oviposition responses.

487-67
NATIVE INSECTS AS POLLINATORS OF CAGED ALFALFA CLONES AND SEEDLING PERFORMANCE OF THE PROGENY.
W E LaBerge O W Isakson W R Kehr
J Econ Entom 5B(1):63-66
Feb 1965 421 J822
Alfalfa, Insects, Plant hardiness, Plant physiology,
Plant propagation, Pollination.

488-67
THE DIURNAL FEEDING ACTIVITY OF GLOSSINA PALLIDIPES AUST. IN RELATION TO TRYPANOSOME CHALLENGE.
B M Leggate R D Pilson
Bull Entomol R 51(4):697-704
Jan 1961 421 B87
Diurnal feeding, Glossina pallidipes Aust., Trypanosome.

489-67
CHANGE IN SEX RATIO OF THE EYE-SPOTTED BUD MOTH, SPILONOTA OCELLANA, OVER ITS ADULT EMERGENCE PERIOD.
E F Legner
J Econ Entom 55(4):559-560
Aug 1962 421 JB22
Sex, Spilonota ocellana, Spilonota ocellana.

490-67
THE INFLUENCE OF PARATHION AND PARA-OXON ON SENSORY HAIRS OF FLIES.
R A Leski L K Cutkomp
J Econ Entom 55(3):281-285
Jun 1962 421 J822
Diptera, Diptera, Hair, Insecticides, Para-oxon, Parathion.

491-67
PARASITES OF THE LESSER CORNSTALK BORER.
D B Leuck M Dupree
J Econ Entom 58(4):779-780
Aug 1965 421 J822
Elasmopalpus lignosellus,
Elasmopalpus lignosellus (Zeller), Parasitism.

492-67
SOME EFFECTS OF GAMMA RADIATION ON THE HORN FLY.
L F Lewis G W Eddy
J Econ Entom 57(2):275-277
Apr 1964 421 JB22
Gamma rays, Haematobia irritans, Haematobia irritans.

493-67
DOSAGE-MORTALITY DATA ON THE BOLLWORM, HELIOTHIS ZEA, AND THE TOBACCO BUDWORM, HELIOTHIS VIRESCENS, IN OKLAHOMA.
P D Lingren D E Bryan
J Econ Entom 58(1):14-18
Feb 1965 421 J822
Heliothis virescens, Heliothis virescens, Heliothis zea,
Heliothis zea (Boddie), Mortality, Oklahoma.

494-67
NOSEMA PHRYGANIDIAE N. SP., A MICROSPORIDIAN PARASITE OF PHRYGANIDIA CALIFORNICA PACKARD.
J J Lipa M E Martignoni
J Invertebrate Path 2(4):396-410, TABS.
1960 421 JB26
Microsporidia, Nosema phryganidiae,
Phryganidia californica Packard.

495-67
COMPARISON OF TETRADIFON EMULSIFIABLE CONCENTRATE AND WETTABLE POWDER FORMULATIONS AGAINST THE TWO-SPOTTED SPIDER MITE.
P C Lippold
J Econ Entom S9(2):303-306
Apr 1966 421 J822
Tetradifon, Tetranychus urticae,
Tetranychus urticae (Koch).

496-67
A FIELD-CAGE STUDY OF POPULATION DYNAMICS OF THE BOLL WEEVIL.
E P Lloyd M E Merki
J Econ Entom 59(3):B3-B6
Feb 1966 421 J822
Anthonomus grandis, Anthonomus grandis boheman, Insect population.

497-67
THE REPRODUCTION-DIAPAUSE APPROACH TO POPULATION CONTROL OF THE BOLL WEEVIL.
E P Lloyd F C Tingle J R Mccoy T B Davich
J Econ Entom 59(4):B13-B16, TABS.
Aug 1966 421 JB22
Anthonomus grandis, Anthonomus grandis, Diapause, Insect population control, Reproduction.

498-67
THE EFFECT OF HEPTACHLOR AND CHLORDANE ON THE FORAGING ACTIVITY OF IMPORTED FIRE ANTS.
C S Lofgren C E Stringer Jr
J Econ Entom 57(27:235-237
Apr 1964 421 JB22
Chlordane, Feeding, Heptachlor, Solenopsis saevissima richteri, Solenopsis saevissima richteri.

499-67
HYDROXY LECITHIN EMULSIONS FOR TREATING INSECTS.
S J Louloudes T J Shortino N L Brown
J Econ Entom 55(5):819
Oct 1962 421 J822
Emulsions, Hydroxy Lecithin, Insect biology.

500-67
RATE OF INCREASE IN RESISTANCE TO DDT IN PINK BOLLWORM ADULTS.
W L Lowry M T Ouye R S Berger
J Econ Entom 58(4):781-782
Aug 1965 421 JB22
Insecticide resistant insects, DDT , Pectinophora gossypiella, Pectinophora gossypiella (Saunders).

501-67
INVESTIGATIONS OF PINK BOLLWORM RESISTANCE TO DDT IN MEXICO AND THE UNITED STATES.
W L Lowry R S Berger
J Econ Entom 58(3):590-591
Jun 1965 421 J822
DDT , Insecticide resistant insects, Mexico, Pectinophora gossypiella, Pectinophora gossypiella (Saunders), Texas.

502-67
BOLLWORM AND TOBACCO BUDWORM RESISTANCE TO SOME INSECTICIDES IN LOWER RIO GRANDE VALLEY IN 1964.
W L Lowry
J Econ Entom 59(2):479-480
Apr 1966 421 JB22
Heliothis virescens, Heliothis virescens (F.), Heliothis zea, Heliothis zea (Boddie), Insecticide resistant insects, Larvae, Rio grande valley.

503-67
THE EFFECTS OF VARIOUS LARVAL AND ADULT DIETS ON THE FECUNDITY AND LONGEVITY OF THE BOLLWORM, TOBACCO BUDWORM, AND COTTON LEAFWORM.
M J Lukefahr D F Martin
J Econ Entom 57(2):233-235, TABS.
Apr 1964 421 JB22
Alabama argillacea, Alabama argillacea, Diet, Fertility, Heliothis virescens, Heliothis virescens, Heliothis zea, Heliothis zea, Larvae, Longevity.

504-67
CONTROL OF THE QUEENSLAND FRUIT FLY BY GAMMA IRRADIATION.
J J Macfarlane
J Econ Entom 59(4):884-889, TABS.
Aug 1966 421 J822
Gamma rays, Queensland fruit fly, Strumet tryoni.

505-67
RECENT LABORATORY TESTS OF INSECTICIDES AGAINST LOCUSTS.
R D MacCuaig M N D B Yeates
J Sci Food A 12(12):861-864, TABS.
Dec 1961 3B2 S012
Acrididae, Cicadidae, Insecticides.

506-67
ADDITIONAL LARVAE OF THE NORTH AMERICAN OLETHREUTINAE (1) (LEPIDOPTERA: TORTRICIDAE).
M R MacKay
Can Entom 94(6):626-643
Jun 1962 421 C16
Insect morphology, Insect morphology, Larvae, Lepidoptera, Olethreutinae, Tortricidae.

507-67
NUTRITIONAL STUDIES ON THE GENUS HIRSUTELLA: III. ACID-HYDROLYZED CASEIN AND AMINO ACID COMBINATIONS AS SOURCES OF NITROGEN.
D M MacLeod
J Invertebrate Path 2(2):139-146, BIBL. 145-146
1960 421 J826
Amino acids, Casein hydrolyzates, Hirsutella gigantea Petch, Nitrogen.

508-67
THE BEHAVIOR OF THE ADULT OF APHODIUS TASMANIAE HOPE (COL., SCARABAEIDAE) IN SOUTH AUSTRALIA.
D A Maelzer
Bull Entomol R 51(4):643-670, TABS.
Jan 1961 421 B87
Aphodius tasmaniae Hope, Australia, Insect behavior.

509-67
THE EFFECTS OF ACARICIDES ON THE DEVELOPMENTAL STAGES OF THE TWO-SPOTTED SPIDER MITE, TETRANYCHUS TELARIUS.
M Mailloux F O Morrison
J Econ Entom 55(4):479-483
Aug 1962 421 JB22
Acaricides, Insect morphology, Tetranychus telarius, Tetranychus urticae.

510-67
CORN EARWORM DEVELOPMENT IN RELATION TO TEMPERATURE.
B S Mangat J W Apple
J Econ Entom 59(4):1005-1006
Aug 1966 421 JB22
Heliothis zea, Heliothis zea, Temperature.

511-67
METABOLISM OF LABELED GLUTAMIC ACID IN ADULT GERMAN COCKROACHES.
A Mansingh
J Econ Entom 59(1):234-235
Feb 1966 421 JB22
Adults, Blatella germanica (L.), Glutamic acid, Metabolism, Radioactive tracers.

512-67
PRELIMINARY OBSERVATIONS ON THE BIOLOGY OF FOLSOMIA CANDIDA WILLEM, 1902 (COLLEMBOLA: ISOTOMIDAE.
V G Marshall D K M Kevan
Can Entom 94(6):575-586, BIBL. 585-586
Jun 1962 421 C16
Collembola, Folsomia candida Willem, Insect biology, Insect morphology, Insect temperature, Isotomidae, Life cycle.

513-67
QUATERNARY AMMONIUM COMPOUNDS FOR THE SURFACE STERILIZATION OF INSECTS.
M E Martignoni J E Milstead
J Invertebrate Path 2(2):124-133, BIBL. 132-133, TABS.
1960 421 J826
Lepidoptera, Quaternary ammonium compounds, Sterilization (insects).

514-67
ATTRACTIVENESS OF INSECTICIDE BAITS TO ADULTS OF DROSOPHILA MELANOGASTER.
H C Mason T J Henneberry H C Gibson
J Econ Entom 56(6):725-727,
Dec 1963 421 JB22
Attractants, Drosophila melanogaster Meigen, Insecticide baits.

515-67
FIELD TESTS OF DICHLORVOS, GENERAL CHEMICAL 4072, HOOKER COMPOUND, AND SYNERGIZED DDT AGAINST MUSCA DOMESTICA.
W Mathis H F Schoof
J Econ Entom 57(2):256-258
Apr 1964 421 JB22
Dichlorvos, DDT , General Chemical 4072, Hooker Compound, Musca domestica.

5I6-67
THE MATING BEHAVIOR OF THE 8OLL WEEVIL, ANTHONOMUS GRANDIS.
M S Mayer J R Brazzel
J Econ Entom 56(5):605-609, TA8S.
Oct 1963 42I J822
Anthonomus grandis, Anthonomus grandis Boheman,
Sex behavior.

5I7-67
STERILIZATION OF ONION MAGGOTS 8Y IRRADIATION WITH CESIUM-137.
R J McClanahan H S Simmons
Can Entom 9B(9):931-935, TA8S.
Sep 1966 42I CI6
Cesium-137, Hylemya antiqua, Hylemya antiqua (Meigen),
Irradiation, Sterilization.

5I8-67
LABORATORY TECHNIQUES FOR EVALUATING HEMPA AND OTHER CHEMOSTERILANTS AGAINST THE MEXICAN FRUIT FLY.
M W McFadden R E P Rubio
J Econ Entom 59(6):I400-1402
Dec 1966 42I JB22
Anastrepha ludens, Anastrepha ludens, Chemosterilants,
Hempa.

5I9-67
VOLATILITY AND ATTRACTIVENESS TO THE MEDITERRANEAN FRUIT FLY OF TRIMEDLURE AND ITS ISOMERS, AND A COMPARISON OF ITS VOLATILITY WITH THAT OF SEVEN OTHER INSECT ATTRACTANTS.
T P McGovern M Beroza K Ohinata D Miyashita L F Steiner
J Econ Entom 59(6):I450-1455
Dec I966 42I JB22
Attractants, Ceratitis capitata, Ceratitis capitata,
Trimedlure.

520-67
THE USE OF AGAR MEDIA IN TRANSPORTING AND REARING PHYTOSEIID MITES.
J A McMurtry G T Scriven
J Econ Entom 55(3):412-414, PL.
Jun I962 42I JB22
Agar, Culture media, Insect rearing, Phytoseiid mites.

52I-67
POLYMERIZATION AS A MEANS OF PROLONGING EFFECTIVENESS OF ORALLY ADMINISTERED SYSTEMATIC INSECTICIDES.
J G Medley R O Drummond
J Econ Entom 55(I):IIB-I2I, TABS.
Feb 1962 42I J822
8ayer 37342, Dimethoate, Polymerization, Resins,
Trichlorfon, Trichlorfon.

522-67
A LARGE-SCALE FIELD EVALUATION OF BOLL WEEVIL DIAPAUSE CONTROL IN MISSISSIPPI.
R A Meeks Jr E P Lloyd R C Robison M E Merki
J Econ Entom 59(4):811-813, TA8S.
Aug I966 42I J822
Anthonomus grandis, Diapause control, Field evaluation,
Mississippi.

523-67
BIOCHEMICAL-RADIOLOGICAL DETERMINATIONS OF PARATHION RESISTANCE IN AEDES MICROMACULIS.
D C Mengle L L Lewallen
J Econ Entom 59(3):743-744
Jun I966 42I JB22
Aedes micromaculis, 8iochemistry, Parathion, Radiology.

524-67
SEPARATION AND PURIFICATION OF DDT -DEGRADING ENZYMES FROM THE HUMAN 8ODY LOUSE.
S Miller A S Perry
J Agr Food Ch 12(2):I67-I69
Mar 1964 38I JB223
Insect metabolism, DDT , Pediculus humanus humanus,
Pediculus humanus humanus.

525-67
BIOLOGY AND ECOLOGY OF THE GARDEN CHAFER, PHYLLOPERTHA HORTICOLA (L.).VII. THE FLIGHT SEASON: MALE AND FEMALE BEHAVIOUR, AND CONCLUDING DISCUSSION.
A Milne
8ull Entomol R 51(2):353-378
Jul 1960 42I 8B7
Flight season, Insect behavior, Insect biology,
Insect ecology, Phyllopertha horticola (L.).

526-67
WINTER MORTALITY OF 8OLL WEEVILS IN COTTON BOLLS IN SOUTH CAROLINA.
E R Mitchell A R Hopkins J T Walker W James
J Econ Entom 59(4):1027-I02B
Aug 1966 42I J822
Anthonomus grandis, Cotton bolls, South Carolina,
Winter mortality.

527-67
STUDIES ON REARING HONEY BEE LARVAE IN THE LABORATORY. I. THE EFFECT OF ROYAL JELLY TAKEN FROM DIFFERENT AGES OF QUEEN CELLS ON QUEEN DIFFERENTIATION.
T Mitsui T Sagawa H Sano
J Econ Entom 57(4):51B-521, TABS.
Aug 1964 42I JB22
Apis mellifera, Apis mellifera L., Insect rearing,
Queen bees, Royal jelly.

528-67
ULTRAVIOLET RADIATION AS AN ATTRACTANT FOR ADULT HORN FLIES.
N O Morgan
J Econ Entom 59(6):I416-I419
Dec 1966 42I JB22
Attractants, Haematobia irritans, Haematobia irritans,
Ultraviolet rays.

529-67
THE PH TOLERANCE OF HORSE FLY LARVAE.
N O Morgan C D Schmidt
J Econ Entom 59(I):222-223
Feb 1966 42I JB22
Haematobia irritans, Haematobia irritans,
Hydrogen-ion concentration, Larvae.

530-67
VARIATIONS IN THE COLOR OF EGGS OF THE HORN FLY.
N O Morgan C D Schmidt
J Econ Entom 59(4):882-884, TA8S.
Aug 1966 42I JB22
Haematobia irritans, Haemotobia irritans, Insect eggs.

531-67
LABORATORY PROPAGATION OF THE HORN FLY.
N O Morgan
J Econ Entom 59(4):I030
Aug 1966 42I JB22
Haematobia irritans, Haematobia irritans,
Insect rearing equipment.

532-67
LABORATORY TECHNIQUE FOR EVALUATING AND DETECTING HORN FLY POPULATIONS THAT ARE SUSCEPTIBLE OR TOLERANT TO FOUR INSECTICIDES BY USING A MODIFIED WHO TEST KIT.
N O Morgan R R 8lume
J Econ Entom 59(3):749-750
Jun I966 42I J822
Haematobia irritans, Haematobia irritans,
Insecticide resistant insects, World Health Organization.

533-67
INFLUENCE OF CATTLE DIET ON SURVIVAL OF HORN FLY LARVAE.
N O Morgan O H Graham
J Econ Entom 59(4):835-837, TA8S.
Aug 1966 42I JB22
Cattle diet, Cattle manure, Haematobia irritans,
Haematobia irritans (L.).

534-67
THE EFFECT OF APHOLATE ON THE OVARIAN DEVELOPMENT OF HOUSE FLIES.
P B Morgan G C LaBrecque
J Econ Entom 55(5):626-628
Oct 1962 42I JB22
Apholate, Musca domestica, Musca domestica L., Ovaries.

535-67
DISPERSION OF INSECTICIDE-RESISTANT POPULATIONS OF THE HOUSE FLY, MUSCA DOMESTICA L.
A P Morris E J Hansen
J Econ Entom 59(I):45-50
Feb 1966 42I J822
Insect population, Insecticides, Musca domestica,
Musca domestica.

536-67
USE OF WHO TSETSE FLY KIT FOR DETERMINING RESISTANCE IN THE STABLE FLY.
G A Mount

J Econ Entom 58(4):794-796
Aug 1965 421 J822
Glossina, Glossina, Stomoxys calcitrans,
Stomoxys calcitrans (L).

537-67
RESISTANCE IN THE EYE GNAT HIPPELATES COLLUSOR TO SOIL INSECTICIDES.
M S Mulla
J Econ Entom 55(1):130-133
Feb 1962 42I J822
Chloropidae, Chloropidae, Hippelates collusor,
Insecticide resistant insects, Insecticides.

538-67
THE ROLE OF CARRIERS IN THE PERFORMANCE OF GRANULAR FORMULATIONS OF PARATHION FOR MOSQUITO CONTROL.
M S Mulla H Axelrod
J Econ Entom 55(2):227-236
Apr 1962 421 J822
Carriers, Culicidae, Culicidae, Granules, Parathion.

539-67
OVIPOSITION AND EMERGENCE PERIOD OF THE EYE GNAT HIPPELATES COLLUSOR.
M S Mulla
J Econ Entom 59(1):93-96
Feb 1966 421 J822
Hippelates collusor (Townsend), Oviposition.

540-67
NEW INSECTICIDES AGAINST ADULTS OF TWO SPECIES OF HIPPELATES EYE GNATS.
M S Mulla T S Adams
J Econ Entom 57(4):505-509, TA8S.
Aug I964 421 J822
Adults, Hippelates collusor (Townsend),
Hippelates pusio (Loew), Insecticides.

541-67
TRANSAMINATION IN AEDES AEGYPTI.
M R V Murphy D W Micks
J Econ Entom 57(1):12-14, PL.
Feb I964 42I J822
Aedes aegypti, Aminotransferases.

542-67
EFFECT OF THREE CHEMOSTERILANTS ON HOUSE FLY LONGEVITY AND STERILITY.
C M Murvosh G C La8recque C N Smith
J Econ Entom 57(I):89-93, TA8S.
Feb 1966 421 J822
Chemosterilants, Musca domestica, Musca domestica.

543-67
AN IN8REEDING METHOD OF REARING THE HOUSE FLY.
S Nagasawa S Asano
J Econ Entom 56(5):714
Oct 1963 42I J822
Insect rearing, Musca domestica, Musca domestica L..

544-67
ACTIVATION OF GUTHION 8Y TISSUE PREPARAIONS FROM THE AMERICAN COCKROACH.
T Nakatsugawa P A Dahm
J Econ Entom 55(5):594-599, 8I8L. 599
Oct I962 421 J822
Azinphosmethyl, Chemical activation, Periplaneta americana,
Periplaneta americana (L.), Tissues.

545-67
EVALUATION OF FIVE ARTIFICIAL DIETS FOR THE LA8ORATORY REARING OF ALFALFA WEEVIL LARVAE.
R R Nash A S Tombes
J Econ Entom 59(I):220-22I
Feb 1966 42I J822
Anthonomus grandis 8oheman, Artificial diets,
Hypera postica, Hypera postica (Gyllenhal), Insect rearing,
Laboratory, Larvae.

546-67
METHODS OF EVALUATING THE CHEMOTROPIC RESPONSE OF 8OLL WEEVILS TO EXTRACTS OF THE COTTON PLANT AND VARIOUS OTHER SU8STANCES.
D L Neff E S Vanderzant
J Econ Entom 56(6):76I-766, TA8S.
Dec I963 42I J822
Anthonomus grandis 8oheman, Chemotropism, Cotton,
Plant extracts.

547-67
THE EFFECT OF STORAGE ON THE VIRULENCE OF A POLYHEDROSIS VIRUS.
N M Neilson D E Elgee
J Invertebrate Path 2(2):165-171
1960 421 J826
Diprion hercynlae (Hartig), Polyhedroses, Storage.

548-67
ARTIFICIAL DIETS FOR THE APPLE MAGGOT, RHAGOLETIS POMONELLA. I. MASS REARING ON CERTAIN DIETS.
W T A Neilson J W McAllan
J Econ Entom 57(3):333-335
Jun 1964 42I J822
Diet, Insect rearing, Rhagoletis pomonella,
Rhagoletis pomonella.

549-67
SURFACE STERILIZATION OF EGGS OF THE 8OLL WEEVIL WITH CUPRIC SULFATE.
W C Nettles Jr N L 8etz
J Econ Entom 59(1):239
Feb 1966 42I J822
Anthonomus grandis, Anthonomus grandis 8oheman,
Cuprlc sulfate, Insect eggs, Sterillzation.

550-67
THE RESPONSE OF HYLEMYA ANTIQUA ADULTS TO HYDROLIZED PROTEINS AND OTHER MATERIALS: A LA8ORATORY STUDY.
H D Niemczyk
J Econ Entom 58(3):425-428
Jun 1965 42I J822
Hylemya antlqua, Hylemya antlqua (Meigen), Proteins.

551-67
MASS REARING OF THE ONION MAGGOT, HYLEMYA ANTIQUA, UNDER LA8ORATORY CONDITIONS.
H D Niemczyk
J Econ Entom 57(I):57-60, PL.
Feb 1964 421 J822
Hylemya antiqua, Hylemya antiqua, Insect rearing.

552-67
8EHAVIOR OF CAMPOLETIS PERDISTINCTUS (VIERECK) AS A PARASITE OF THE TO8ACCO 8UDWORM.
L W Noble H M Graham
J Econ Entom 59(5):III8-II20
Oct 1966 421 J822
Campoletis perdistinctus (Viereck), Heliothis virescens,
Heliothis vlrescens (F.), Insect behavlor, Parasites.

553-67
GROUP EFFECTS ON FEEDING IN ADULT MALES OF THE DESERT LOCUST SCHISTOCERCA GREGARIA (FORSK.), IN RELATION TO SEXUAL MATURATION.
M Norris
8ull Entomol R 51(4):75I-753
Jan 1961 421 887
Feedlng, Insect morphology, Maturatlon,
Schistocerca gregaria (Forsk.).

554-67
A TECHNIQUE FOR REARING THE GYPSY MOTH, PORTHETRIA DISPAR (L.), ON AN ARTIFICIAL DIET.
T M ODell W D Rollinson
J Econ Entom 59(3):74I-742
Jun 1966 42I J822
Artlflclal dlet, Insect rearing technlques,
Porthetria dispar, Porthetria dispar.

555-67
8-VITAMIN REQUIREMENTS OF THE PINK 8OLLWORM.
M T Ouye E S Vanderzant
J Econ Entom 57(4):427-430
Aug 1964 421 J822
Insect nutritlon, Pectinophora gossypleila,
Pectinophora gossypleila.

556-67
MATING STUDIES OF THE PINK 8OLLWORM.
M T Ouye H M Graham C A Richmond D F Martin
J Econ Entom 57(2):222-225, PL.
Apr I964 42I J822
Insect behavior, Pectinophora gossypielia,
Pectinophora gossypleila.

557-67
TEMPORARY AND PERMANENT STERILIZATION OF HOUSE FLIES WITH CHEMOSTERILANTS.
R R Painter W W Kilgore

J Econ Entom 57(1):154-157, TABS.
Feb 1964 421 J822
Chemosterilants, Musca domestica, Musca domestica.

558-67
THE EFFECT OF TEMPERATURE FECUNDITY AND LONGEVITY OF THE BLACK BLOW FLY, PHORMIA REGINA.
D W Parrish W E Bickley
J Econ Entom 59(4):B04-808, TABS.
Aug 1966 421 JB22
Fertility, Longevity, Phormia regina, Phormia regina, Temperature.

559-67
CONTROL OF THE MIDGE GLYPTOTENDIPES PARIDES WITH LOW-VOLUME AERIAL SPRAYS OF MALATHION.
R S Patterson D L von Windeguth B M Glancy F L Wilson
J Econ Entom 59(4):B64-866, TABS.
Aug 1966 421 JB22
Aerial spraying, Cecidomyiidae, Glyptotendipes paripes.

560-67
THE ENZYMATIC IN VITRO DEGRADATION OF DDT BY SUSCEPTIBLE AND DDT - RESISTANT BODY LICE.
A S Perry S Miller A J Buckner
J Agr Food Ch 11(6):457-462, BIBL. 461-462, TABS.
Nov 1963 381 JB223
Insect metabolism, Insecticide resistant insects, DDT , Pediculus humanus, Pediculus humanus humanus.

561-67
DEVELOPMENT OF RESISTANCE TO INSECTICIDES BY THE ONION MAGGOT, HYLEMYA ANTIQUA, IN MINNESOTA.
A G Peterson M S Silberman A B Meade
J Econ Entom 56(5):580-584, TABS.
Oct 1963 421 JB22
Hylemya antiqua, Hylemya antiqua (Meigen), Insecticide resistant insects, Insecticides, Minnesota.

562-67
A QUICK METHOD FOR SEX DETERMINATION OF CODLING MOTH PUPAE.
D Peterson
J Econ Entom 58(3):576,
Jun 1967 421 JB22
Carpocapsa pomonella, Carpocapsa pomonella (L.), Pupae, Sex determination.

563-67
FIELD INSECTICIDE TESTS AGAINST SEVERAL COTTON PESTS.
T R Pfrimmer M E Merkl
J Econ Entom 55(1):121-124, TABS.
Feb 1962 421 JB22
Anthonomus grandis, Anthonomus grandis Boheman, Cotton, Insecticides, Lygus lineolaris, Thrips.

564-67
LIFE HISTORY AND BEHAVIOUR OF SCELIO CALOPTENI RILEY (HYMENOPTERA: SCELIONIDAE), A PARASITE OF GRASSHOPPER EGGS.
R Pickford
Can Entom 96(9):1167-1172
Sep 1964 421 C16
Eggs, Grasshoppers, Hymenoptera, Scelio calopteni Riley, Scelionidae.

565-67
METABOLISM OF METHAPHOXIDE IN MOSQUITOES, HOUSE FLIES, AND MICE.
F W Plapp Jr W S Bigley G A Chapman G W Eddy
J Econ Entom 55(5):607-613, TABS.
Oct 1962 421 J822
Culicidae, Culicidae, Insect metabolism, Metepa, Mice, Musca domestica, Musca domestica L..

566-67
FLIGHT HABITS OF THE ALFALFA WEEVIL IN NEW YORK.
G O Poinar Jr G G Gyrisco
J Econ Entom 55(2):265-266
Apr 1962 421 JB22
Hypera postica, Hypera postica, Insect behavior, Insect collecting equipment.

567-67
THE BIOLOGY AND BEHAVIOUR OF THE EUROPEAN PINE SHOOT MOTH RHYACIONIA BUOLIANA (SCHIFF.), IN SOUTHERN ONTARIO. II. EGGS, LARVA, AND PUPA.
P J Pointing
Can Entom 95(8):844-863, BIBL. 862-863, TABS.
Aug 1963 421 C16
Eggs, Insect behavior, Insect biology, Larvae, Ontario, Pupae, Rhyacionia buoliana.

568-67
DAILY RHYTHM OF OVIPOSITION IN THE TWO-SPOTTED SPIDER MITE.
B Poicik J W Nowosielski J A Naegele
J Econ Entom 58(3):467-469
Jun 1965 421 JB22
Diurnal rhythm, Oviposition, Tetranychus urticae, Tetranychus urticae Koch.

569-67
EFFECT OF HEAT ON THE FERTILITY OF THE CODLING MOTH, CARPOCAPSA POMONELLA (L.) (LEPIDOPTERA:OLETHREUTIDAE.
M D Proverbs J R Newton
Can Entom 94(3):225-233
Mar 1962 421 C16
Carpocapsa pomonella, Carpocapsa pomonella (L.), Fertility, Insect temperature, Lepidoptera, Olethreutidae.

570-67
LIFE-HISTORY AND BEHAVIOUR OF THE PREDACIOUS MITE TYPHLODROMUS (T.) CAUDIGLANS SCHUSTER (ACARINA: PHYTOSEIIDAE) IN ONTARIO, WITH NOTES ON THE PREY OF RELATED SPECIES.
W L Putman
Can Entom 94(2):163-177
Feb 1962 421 C16
Acarina, Insect behavior, Life cycle, Phytoseiidae, Predaceous insects, Typhlodromus (T.) caudiglans Schuster.

571-67
THE PROGRESS OF NYMPHAL DEVELOPMENT IN PEST GRASSHOPPERS (ACRIDIDAE) OF WESTERN CANADA.
L G Putnam
Can Entom 95(11):1210-1216
Nov 1963 421 C16
Acrididae, Camnula pellucida, Canada, Grasshoppers, Melanoplus bilituratus, Melanoplus bivittatus, Nymphs.

572-67
NOTES ON TWO PARASITES ATTACKING A LEMA SP. (COLEOPTERA CHRYSOMELIDAE).
B Puttler
J Econ Entom 59(2):475-476
Apr 1966 421 JB22
Larvae, Lema sp., Paralispe infernalis (Townsend), Parasitism, Spilochalcis delumbis Cresson.

573-67
SWARMING, MATING, AND DENSITY OF ANOPHELES STEPHENSI MYSORENSIS.
M S Quraishi
J Econ Entom 58(5):821-824
Oct 1965 421 J822
Anopheles stephensi mysorensis, Copulation, Swarm formation.

574-67
WATER AND FOOD RELATIONSHIP OF THE EGGS AND FIRST INSTAR NYMPH OF EURYGASTER INTEGRICEPS WITH THE AID OF P32.
M S Quraishi
J Econ Entom 56(5):666-668, TABS.
Oct 1963 421 J822
Eurygaster integriceps Puton, Food, Insect eggs, P32, Water.

575-67
UPTAKE, TRANSFER, AND LOSS OF P32 DURING METAMORPHOSIS, MATING, AND OVIPOSITION IN AEDES VEXANS.
M S Quraishi R A Brust L P Lefkovitch
J Econ Entom 59(6):1331-1333
Dec 1966 421 JB22
Aedes vexans, Mating, Metamorphosis, Oviposition, P32.

576-67
EFFECT OF ULTRASONIC WAVES ON THE HATCHING OF AEDES AEGYPTI EGGS AT A FREQUENCY OF 0.5 MEGACYCLES PER SECOND.
M S Quraishi M H Osmani S H Ahmad
J Econ Entom 56(5):668-670, TABS.
Oct 1963 421 J822
Aedes aegypti (L.), Hatching, Insect eggs, Ultrasonic waves.

577-67
AN IMPROVED METHOD FOR DETERMINING COLONY VIGOR OF WESTERN HARVESTER ANTS, POGONONOMYRMEX OCCIDENTALIS.
S R Race
J Econ Entom 57(4):558-559
Aug 1964 421 J822
Colony vigor, Pogonomyrmex occidentalis.

578-67
THE EFFECTS OF DDT AND SUBLETHAL DOSES OF DICOFOL ON REPRODUCTION OF THE TWO-SPOTTED SPIDER MITE.
S S Rajinder L K Cutkomp
J Econ Entom 59(2):249-253, BIBL. 252-253, TABS.

Apr 1966 421 J822
Dicofol, DDT , Reproduction, Tetranychus urticae, Tetranychus urticae.

S79-67
METHODS OF TESTING HYLEMYA ROOT MAGGOTS FOR INSECTICIDE RESISTANCE.
D C Read
J Econ Entom S8(4):719-727, TABS.
Aug 1965 421 J822
Hylemya brassicae, Hylemya brassicae (Bouche), Hylemya brassicae (Melgen), Insecticide resistant insects.

S80-67
AN IMPROVED MEDIUM FOR REARING RED-BANDED LEAF ROLLER.
R E Redfern
J Econ Entom 57(2):296-297
Apr 1964 421 JB22
Argyrotaenia velutinana, Argyrotaenia velutinana, Culture media, Insect rearing.

SB1-67
LABORATORY METHODS FOR REARING RUST MITES (PHYLLOCOPTRUTA OLEIVORA AND ACULUS PELEKASSI) ON CITRUS.
D K Reed A K Burditt C R Crittenden
J Econ Entom S7(1):130-133
Feb 1964 421 J822
Aculus pelekassi, Citrus, Insect rearing, Phyliocoptruta oleivora, Phyllocoptruta oleivora.

SB2-67
BIOLOGY OF MOUNTAIN PINE BEETLE, DENDROCTONUS MONTICULAE HOPKINS, IN THE EAST KOOTENAY REGION OF BRITISH COLUMBIA.I. LIFE CYCLE, BROOD DEVELOPMENT, AND FLIGHT PERIODS.
R W Reid
Can Entom 94(S):S31-S41
May 1962 421 C16
Dendroctonus monticolae Hopkins, Dendroctonus ponderosae, Insect biology, Insect flight, Insect morphology, Life cycle.

SB3-67
BIOLOGY OF THE MOUNTAIN PINE BEETLE, DENDROCTONUS MONTICOLAE HOPKINS, IN THE EAST KOOTENAY REGION OF BRITISH COLUMBIA II. BEHAVIOUR IN THE HOST, FECUNDITY, AND INTERNAL CHANGES IN THE FEMALE.
R W Reid
Can Entom 94(6):60S-613, BIBL. 612-613
Jun 1962 421 C16
Dendroctonus monticolae Hopkins, Dendroctonus ponderosae, Fertility, Insect behavior, Insect biology, Insect temperature, Plant hosts.

S84-67
TECHNIQUE FOR MASS REARING OF THE PINK BOLLWORM BY INFESTING DIET MEDIUM WITH EGGS.
C A Richmond D F Martin
J Econ Entom S9(3):762-763
Jun 1966 421 JB22
Eggs, Mass rearing, Pectinophora gossypiella, Pectinophora gossypiella.

S85-67
MASS REARING PINK BOLLWORMS.
C A Richmond C Ignoffo
J Econ Entom S7(4):S03-S0S, TABS.
Aug 1964 421 J822
Insect rearing, Pectinophora gossypiella, Pectinophora gossypiella.

SB6-67
LABORATORY STUDIES OF THE EFFECT OF DRI-DIE 67 ON THE TATUS.
R L Ridgway
J Econ Entom SS(6):1014
Dec 1962 421 JB22
Centruroides vittatus, Dri-die 67, Dusting, Scorpionida.

SB7-67
HYDROGENATION REFINING VS. EFFICIENCIES OF SPRAY OILS AGAINST CITRUS RED MITE EGGS AND CALIFORNIA RED SCALE.
L A Riehl M J Garber J P LaDue J L Rodriguez E L Wilson
J Econ Entom 57(4):S22-S2S
Aug 1964 421 JB22
Aonidiella aurantii, Aonidiella aurantii (Maskell), Hydrogenation, Insect eggs, Panonychus citri, Panonychus citri (McGregor), Spraying.

SB8-67
DDT SUSCEPTIBILITY OF DROSOPHILA MELANOGASTER IN RELATION TO DIETARY AMINO NITROGEN.
C T Rivera A L Steinhauer
J Econ Entom S5(3):393-39S
Jun 1962 421 JB22
Amino compounds, Diet, DDT , Drosophila melanogaster, Nitrogen.

5B9-67
A CAGE TO CONTAIN SMALL INSECTS DURING POLLINATION STUDIES.
R B Roberts
J Econ Entom 55(2):267-268
Apr 1962 421 JB22
Insect cages, Pollination, Spermatophyta, Vegetables.

S90-67
EFFECT OF SOME OIL INSECTICIDE COMBINATIONS ON COFFEE LEAF MINER.
J G Rodriguez J M Campbell K G Eveleens
J Econ Entom S9(4):773-779, PL., TABS.
Aug 1966 421 J822
Coffee leaf miner, Leucoptera coffeela, Oil insecticide combinations.

S91-67
COMPARATIVE INSECTICIDAL SUSCEPTIBILITY OF FIELD-COLLECTED AND LABORATORY-REARED FACE FLIES, MUSCA AUTUMNALIS.
P G Rouseil
J Econ Entom S8(4):674-677
Aug 196S 421 J822
Insecticide resistant insects, Musca autumnalis, Musca autumnalis DeGeer.

592-67
DELAYED INOCULATIVE FREEZING OF INSECTS.
R W Salt
Can Entom 95(11):1190-1202
Nov 1963 421 C16
Inoculative freezing, Insects.

S93-67
EGGS AND OVIPOSITION SITES OF SOME PREDACIOUS MIRIDS ON APPLE TREES (MIRIDAE: HEMIPTERA).
K H Sanford
Can Entom 96(9):1185-1189
Sep 1964 421 C16
Hemiptera, Insect eggs, Miridae, Oviposition.

594-67
TWO ARTIFICIAL (OLIGIDIC) MEDIA FOR THE DOUGLAS-FIR BEETLE, DENDROCTONUS PSEUDOTSUGAE HOPKINS (COLEOPTERA: SCOLYTIDAE).
F H Schmidt
Can Entom 98(10):10S0-10SS, BIBL. 1054-10SS, TABS.
Oct 1966 421 C16
Coleoptera, Culture media, Dendroctonus pseudotsugae, Dendroctonus pseudotsugae Hopkins, Scolytidae.

S95-67
THE RELATION OF WEATHER TO TWO POPULATION DECLINES OF THE BLACK-HEADED BUDWORM, ACLERIS VARIANA (FERNALD) (LEPIDOPTERA:TORTRICIDAE), IN COASTAL ALASKA.
D C Schmiege
Can Entom 9B(10):1045-10S0, TABS.
Oct 1966 421 C16
Acleris variana, Acleris variana (Fernald), Alaska, Insect population, Lepidoptera, Tortricidae, Weather.

596-67
IMPROVEMENTS IN THE METHODS OF PREPARATION AND STORAGE OF HOUSE FLY MICROSOMES.
R D Schonbrod L C Terriere
J Econ Entom 59(6):1411-1413
Dec 1966 421 JB22
Microsomes, Musca domestica, Musca domestica.

S97-67
HYDROXYLATION AS A FACTOR IN RESISTANCE IN HOUSE FLIES AND BLOW FLIES.
R D Schonbrod W W Phillco L C Terriere
J Econ Entom SB(1):74-75
Feb 196S 421 J822
Insecticide resistant insects, Musca domestica, Musca domestica (L.), Phormia regina, Phormia regina (Melgen).

598-67
ATTRACTANTS FOR JAPANESE BEETLES TESTED IN THE FIELD.
P H Schwartz D N Hamilton C W Jester B G Townshend
J Econ Entom 59(6):1516-1517
Dec 1966 421 J822
Attractants, Popillia japonica, Popillia japonica.

599-67
SEXUAL BEHAVIOR IN BLISTER BEETLE (COLEOPTERA: MELOIDAE)
I. THE GENUS PYROTA.
R B Selander
Can Entom 96(8):1037-1083, TABS.
Aug 1964 421 C16
Coleoptera, Insect behavior, Meloidae, Pyrota, Sex behavior.

600-67
TECHNIQUES FOR MASS-PRODUCING COCCINELLA SEPTEMPUNCTATA.
W A Shands M K Shands G W Simpson
J Econ Entom 59(4):1022-1023, PL.
Aug 1966 421 JB22
Coccinella septempunctata, Mass reproduction,
Predaceous insects.

601-67
FACTORS THAT AFFECT REPRODUCTION OF THE GARDEN SYMPHYLAN,
SCUTIGERELLA IMMACULATA.
C H Shanks Jr
J Econ Entom 59(6):1403-1406
Dec 1966 421 J822
Reproduction, Scutigerella immaculata,
Scutigerella immaculata.

602-67
THE ACTIVITY OF SOME INSECTICIDES AGAINST THE GARDEN SYMPHY-
LAN, SCUTIGERELLA IMMACULATA.
C H Shanks Jr G Gans
J Econ Entom 57(3):360-363
Jun 1964 421 JB22
Scutigerella immaculata, Scutigerella immaculata.

603-67
APPARENT INCREASE IN POPULATIONS OF THE STRAWBERRY APHID
CAUSED BY PHORATE AND DISULFOTON.
C H Shanks Jr
J Econ Entom 59(4):935-937, TABS.
Aug 1966 421 J822
Chaetosiphon fragaefolii, Chaetosiphon fragaefolii,
Disulfoton, Phorate, Population increase.

604-67
EFFECT OF CHEMICAL AND MICROBIAL INSECTICIDES ON SEVERAL IN-
SECT PESTS OF LETTUCE IN SOUTHERN CALIFORNIA.
H H Shorey I M Hall
J Econ Entom 55(2):169-174, TABS.
Apr 1962 421 JB22
Chemicals, Insecticides, Lettuce, Microorganisms.

605-67
SEX PHEROMONES OF NOCTUID MOTHS. I. A QUANTITATIVE BIO-
ASSAY FOR THE SEX PHEROMONE OF TRICHOPLUSIA NI (LEPIDOP-
TERA: NOCTUIDAE).
H H Shorey L K Gaston T R Fukuto
J Econ Entom 57(2):252-254, PL.
Apr 1964 421 J822
Attractants, Lepidoptera, Moths, Noctuidae, Phermones,
Trichoplusia ni.

606-67
A SIMPLE ARTIFICIAL REARING MEDIUM FOR THE CABBAGE LOOPER.
H H Shorey
J Econ Entom 56(4):536-537
Aug 1963 421 JB22
Culture media, Insect rearing, Trichoplusia ni,
Trichoplusia ni (Huebner).

607-67
INSECT PHEROMONE COLLECTION WITH ABSORPTION COLUMNS. 1.
STUDIES ON MODEL ORGANIC COMPOUNDS.
R M Silverstein J O Rodin
J Econ Entom 59(5):1152-1154
Oct 1966 421 JB22
Absorption columns, Model organic compounds, Pheromone.

608-67
2-IMIDAZOLIDINONE AS AN INSECT GROWTH INHIBITOR AND CHEMO-
STERILANT.
H G Simkover
J Econ Entom 57(4):574-579, BIBL. 578-579, TABS.
Aug 1964 421 JB22
Chemosterilants, Drosophila melanogaster (Meigan),
Insect growth inhibitors, Musca domestica (L.),
2-Imidazolidinone.

609-67
LIFE-HISTORY AND BEHAVIORAL STUDIES ON MICRUTALIS MALLEIFE-
RA, A VECTOR OF PSEUDO-CURLY TOP VIRUS.
J N Simons
J Econ Entom 55(3):363-365
Jun 1962 421 JB22
Membracidae, Micrutalis malleifera, Pseudo-curly top virus.

610-67
EFFECT OF TEMPERATURE AND HOST PLANTS ON PROGENY PRODUCTION
OF FOUR BIOTYPES OF CORN LEAF APHID, RHOPALOSIPHUM MAIDIS.
S R Singh R H Painter
J Econ Entom 57(3):348-350
Jun 1964 421 JB22
Host plants, Reproduction, Rhopalosiphum maidis,
Rhopalosiphum maidis, Temperature.

611-67
FEEDING AND REPRODUCTION OF SOME STORED-PRODUCT MITES
ON SEED-BORNE FUNGI.
R N Sinha
J Econ Entom 59(5):1227-1232
Oct 1966 421 JB22
Insect feeding, Reproduction, Seed-borne fungi,
Stored-product mites.

612-67
PROLONGED LARVAL DEVELOPMENT IN BUPRESTIS AURULENTA L.
(COLEOPTERA: BUPRESTIDAE). A REVIEW WITH NEW CASES.
D N Smith
Can Entom 94(6):586-593, BIBL. 593
Jun 1962 421 C16
Buprestidae, Buprestis aurulenta L., Coleoptera,
Insect morphology, Larvae.

613-67
OVARIOLES AND DEVELOPING EGGS IN GRASSHOPPERS.
D S Smith
Can Entom 96(9):1255-1258
Sep 1964 421 C16
Grasshoppers, Insect eggs, Ovarioles.

614-67
A NOTE ON THE LONGEVITY AND BEHAVIOUR OF ADULT GOLDEN BUP-
RESTIDS, BUPRESTIS AURULENTA L. (COLEOPTERA: BUPRESTI-
DAE UNDER ARTIFICIAL CONDITIONS.
D W Smith
Can Entom 94(6):672
Jun 1962 421 C16
Buprestidae, Buprestis aurulenta, Buprestis aurulenta L.,
Coleoptera, Insect behavior, Longevity.

615-67
THE EFFECT OF AIR AND GROUND SURFACE TEMPERATURE ON BOLL
WEEVIL WINTER SURVIVAL.
G L Smith A L Scales
J Econ Entom 58(1):174-175
Feb 1965 421 JB22
Air temperature, Anthonomus grandis, Environment,
Soil temperature.

616-67
MOTHS OF THE EUROPEAN CORN BORER INFECTED WITH THE FUNGUS,
BEAUVERIA BASSIANA (BALSAMO) VUILLEMIN.
O E Smith G T York
J Invertebrate Path 2(2):196-197
1960 421 JB26
Beauveria bassiana (Balsamo) Vuillemin,
Pyrausta nubilalis (Hubner).

617-67
EFFECTS OF TEPA ON THE REPRODUCTIVE ORGANS AND EMBRYOGENY
OF THE GERMAN COCKROACH.
B J Smittle J B Schmitt G S Burden
J Econ Entom 59(6):1419-1423
Dec 1966 421 JB22
Blattella germanica, Blattella germanica, Insect embryos,
Reproductive organs, Tepa.

618-67
RESPONSE OF THE EASTERN SUBTERRANEAN TERMITE TO AN ATTRACT-
IVE EXTRACT FROM LENZITES TRABEA-INVADED WOOD.
R V Smythe T C Allen H C Coppel
J Econ Entom 58(3):420-423
Jun 1965 421 JB22
Attractants, Lenzites trabea, Reticulitermes flavipes,
Reticulitermes flavipes (Kollar).

619-67
INVESTIGATIONS OF THE POSSIBILITY OF HOST SPECIFIC STRAINS OF THE BOLLWORM AND TOBACCO BUDWORM IN MISSISSIPPI.
J W Snow J R Brazzel
J Econ Entom 58(3):525-526
Jun 1965 421 JB22
Heliothis virescens, Heliothis virescens (F.), Heliothis zea, Heliothis zea (Boddie), Mississippi, Plant hosts.

620-67
A COMPARISON OF CHEMORECEPTOR AND WHOLE-FLY RESPONSES TO DDT AND PARATHION.
S A Sollman L K Cutcomp
J Econ Entom 56(4):492-494
Aug 1963 421 JB22
Chemoreceptors, DDT , Musca domestica L., Parathion.

621-67
CHARACTERS FOR DETERMINING SEX IN ELM SPANWORM PUPAE.
J D Solomon
J Econ Entom 55(2):269-270
Apr 1962 421 JB22
Geometridae, Geometridae, Pupae, Sex determination.

622-67
TEPA FOR STERILIZING MALE CARPENTERWORMS.
J D Solomon
J Econ Entom 59(6):1528-1529
Dec 1966 421 J822
Chemosterilants, Prionoxystus robiniae, Prionoxystus robiniae, Tepa.

623-67
LABORATORY REARING OF ANASTREPHA SERPENTINA.
L M Spishakoff
J Econ Entom 59(4):1010-1011
Aug 1966 421 JB22
Anastrepha serpentina, Laboratory rearing.

624-67
DISSEMINATION OF NUCLEAR POLYHEDROSIS VIRUS AGAINST THE FOREST TENT CATERPILLAR, MALACOSOMA DISSTRIA (HUBNER) (LEPIDOPTERA : LASIOCAMPIDAE).
G R Stairs
Can Entom 96(7):1017-1021
Jul 1964 421 C16
Lasiocampidae, Lepidoptera, Malacosoma disstria (Hubner), Polyhedroses, Viruses.

625-67
MELON FLY ERADICATION BY OVERFLOODING WITH STERILE FLIES.
L F Steiner E J Harris W C Mitchell M S Fujimoto
J Econ Entom 58(3):519-522
Jun 1965 421 JB22
Dacus cucurbitae, Dacus cucurbitae Coquillet, Reproduction, Sterility.

626-67
THE DURATION OF VIABILITY AND INFECTIVITY OF CERTAIN INSECT PATHOGENS.
E A Steinhaus
J Invertebrate Path 2(3):225-229
1960 421 J826
Insect diseases, Microorganisms.

627-67
GRANULOSIS OF THE GRANULATE CUTWORM.
E A Steinhaus G A Marsh
J Invertebrate Path 2(2):115-117
1960 421 J826
Agrotis subterranea (Fabricius), Granuloses, Lepidoptera, Peridroma margaritosa (Haworth).

628-67
NOTES ON POLYHEDROSES IN PERIDROMA, PRODENIA, COLIAS, HELIOTHIS, AND OTHER LEPIDOPTERA.
E A Steinhaus
J Invertebrate Path 2(4):327-333
1960 421 J826
Colias, Heliothis, Lepidoptera, Peridroma, Polyhedroses, Prodenia.

629-67
OBSERVATIONS ON THE ROLE OF STRESS IN A GRANULOSIS OF THE VARIEGATED CUTWORM.
E A Steinhaus J P Dineen
J Invertebrate Path 2(1):55-65, TABS.
1960 421 JB26
Granuloses, Peridroma margaritosa (Haworth).

630-67
EFFECT OF SPRAY VOLUME AND PRESSURE ON THE CONTROL OF LARVAE OF THE ALFALFA WEEVIL, HYPERA POSTICA, WITH CONVENTIONAL SPRAY EQUIPMENT.
A L Steinhauer C C Blickenstaff V E Adler
J Econ Entom 59(4):1012
Aug 1966 421 JB22
Hypera postica, Hypera postica, Larvae, Spray pressure, Spray volume, Spraying equipment.

631-67
DIATOMACEOUS EARTH TESTED AGAINST SPRUCE BUDWORM.
M J Stelzer
J Econ Entom 59(3):744-745
Jun 1966 421 J822
Choristoneura fumiferana, Choristoneura fumiferana, Diatomaceous earth.

632-67
EFFECTS OF SOIL MOISTURE ON SURVIVAL OF PREPUPAE OF THE ALKALI BEE.
W P Stephen
J Econ Entom 58(3):472-474
Jun 1965 421 JB22
Nomia melanderi, Nomia melanderi Cockerell, Pupae, Soil moisture.

633-67
A COTTONSEED-MEAL DIET FOR LABORATORY CULTURES OF THE BOLL WEEVIL.
W L Sterling S G Wellso P L Adkisson H W Dorough
J Econ Entom 58(5):867-869
Oct 1965 421 JB22
Anthonomus grandis, Anthonomus grandis, Cottonseed meal, Culture media.

634-67
ORIENTAL FRUIT FLY ERADICATION BY MALE ANNIHILATION.
L F Steiner W C Mitchell E J Harris T T Kozuma M S Fujimoto
J Econ Entom 58(5):961-964
Oct 1965 421 JB22
Dacus dorsalis, Insect eradication.

635-67
LABORATORY EMERGENCE OF ADULTS FROM OVERWINTERING PUPAE OF THE APPLE MAGGOT, RHAGOLETIS POMONELLA (WALSH) (DIPTERA: TEPHRITIDAE).
A B Stevenson
Can Entom 95(11):1154-1159
Nov 1963 421 C16
Diptera, Hibernation, Insect emergence, Pupae, Rhagoletis pomonella (Walsh), Tephritidae.

636-67
EXTENSION OF THE INCUBATION PERIOD OF SOUTHWESTERN CORN BORER EGGS BY REFRIGERATION.
K Stewart R R Walton
J Econ Entom 58(3):579-580
Jun 1965 421 J822
Incubation period, Insect eggs, Refrigeration, Zeadiatraea grandiosella, Zeadiatraea grandiosella (Dyar).

637-67
CROSSBREEDING STUDIES WITH SEVEN SPECIES OF TROGODERMA.
R G Strong R G Arndt
J Econ Entom 55(4):445-448
Aug 1962 421 J822
Crossbreeding (Insects), Insect behavior, Reproduction, Trogoderma.

638-67
MONITORING ELECTROPHYSIOLOGICAL RESPONSES OF COCKROACHES FOR SPACE RESEARCH.
W N Sullivan M S Schechter S R Dutky J C Keller
J Econ Entom 55(6):985-989
Dec 1962 421 J822
Blattidae, Blattidae, Electrophysiology, Space biology.

639-67
EFFECTS OF TEMPERATURE ON HATCHING AND ON LONGEVITY ON STARVED FIRST-INSTAR LARVAE OF HYLEMYA BRASSICAE (BOUCHE) (DIPTERA: ANTHOMYIIDAE).
G E Swailes
Can Entom 95(8):878-881
Aug 1963 421 C16
Anthomyiidae, Diptera, Hylemya brassicae, Hylemya brassicae, Temperature.

10 640-67

640-67
STERILIZATION OF THE CA88AGE MAGGOT WITH APHOLATE.
G E Swalles
J Econ Entom 59(3):596-598
Jun 1966 421 J822
Apholate, Hylemya brassicae, Hylemya brassicae,
Sterilization.

641-67
A MARKING AND RECOVERY METHOD FOR USE IN 80LL WEEVIL MOVEMENT STUDIES.
H M Taft H R Agee
J Econ Entom 55(6):1018-1019
Dec 1962 421 J822
Anthonomus grandis, Anthonomus grandis, Insect behavior,
Insect marking.

642-67
THE SUSCEPTIBILITY OF 8RACON-PARALYZED CORCYRA CEPHALONICA (STAINTON) TO 8ACILLUS THURINGIENSIS VAR. THURINGIENSIS 8ERLINER.
M Tamashiro
J Invertebrate Path 2(3):209-219, BIBL. 2I8-219
1960 421 J826
8acillus thuringiensis var. thuringiensis 8erliner, 8racon,
Corcyra cephalonica (Stainton).

643-67
A CYTOPLASMIC POLYHEDROSIS OF THE ARMYWORM, PSEUDALETIA UNIPUNCTA (HAWORTH) (LEPIDOPTERA, NOCTUIDAE).
Y Tanada G Y Chang
J Invertebrate Path 2(3):201-208
1960 42I J826
Lepidoptera, Noctuidae, Polyhedroses,
Pseudaletia unipuncta (Haworth).

644-67
STUDIES ON ERADICATION OF ANOPHELES PHAROENSIS 8Y THE STERILE-MALE TECHNIQUE USING CO8ALT. 11. INDUCED DOMINANT LETHALS IN THE IMMATURE STAGES.
A O Tantawy A A Abdel-Malek A W Wakid
J Econ Entom 59(6):1392-1394
Dec I966 42I J822
Anophales pharoensis, Gamma rays, Sterilization.

645-67
IMPROVED LA8ORATORY TECHNIQUES FOR REARING CALIFORNIA RED SCALE ON LEMONS.
H Tashiro
J Econ Entom 59(3):604-608
Jun 1966 421 J822
Anonidiella aurantii, Aonidiella aurantii, Laboratories,
Lemons, Rearing, Varmiculite.

646-67
8UTYL SOR8ATE AS AN ATTRACTANT FOR EUROPEAN CHAFER.
H Tashiro S I Gartier M 8aroza N Graen
J Econ Entom 57(2):230-233, TAB5.
Apr 1964 421 J822
Amphimallon majalis, Amphimallon majalis, Attractants,
8utyl sorbate.

647-67
REDUCED FECUNDITY OF THE TWO-SPOTTED SPIDER MITE ON METAL-CHELATE-TREATED LEAVES.
L C Terriere N Rajadhyaksha
J Econ Entom 57(1):95-99, TA8S.
Feb 1964 42I J822
Chelation, Fertility, Tetranychus telarius,
Tetranychus urticae.

648-67
A LIST AND BRIEF DESCRIPTION OF THE MICROSPORIDIA INFECTING INSECTS.
H M Thomson
J Invertebrate Path 2(4):346-378, 8I8L. 378-385
1960 421 J826
Microsporidia.

649-67
EFFECT OF GAMMA RADIATION ON TROGODERMA GLABRUM AND ATTAGENUS PICEUS.
E W Tilton W E Burkholder R R Cogburn
J Econ Entom 59(4):944-948, TA8S.
Aug 1966 421 J822
Attagenus piceus, Gamma rays, Trogoderma glabrum.

650-67
EFFECTS OF GAMMA RADIATION ON RHYZOPERTHA DOMINICA, SITOPHILUS ORYZAE, TRIBOLIUM CONFUSUM, AND LASIODERMA SERRICORNE.
E W Tilton W E 8urkholder R R Cogburn
J Econ Entom 59(6):1363-1368
Dec 1966 421 J822
Gamma rays, Lasioderma serricorne, Rhyzopertha dominica,
Sitophilus oryzae, Tribolium confusum.

651-67
THE EFFECTS OF CONFINING CONFUSED FLOUR 8EETLES IN GELATIN CAPSULES 8EFORE, DURING, AND AFTER GAMMA IRRADIATION.
E W Tilton W E 8urkholder R R Cogburn
J Econ Entom 58(1):175-176
Feb 1965 421 J822
Irradiation, Stored products,
Tribolium confusum Jacquelin duVal.

652-67
LIFE-HISTORY STUDIES OF MYZUS PERSICAE IN HAWAII.
H H Toba
J Econ Entom 57(2):290-291
Apr 1964 42I J822
Hawaii, Life cycle, Myzus persicae.

653-67
MATING AND REPRODUCTIVE HISTORY OF 8LACKLIGHT-TRAPPED CRANBERRY FRUITWORM MOTHS.
W E Tomlinson Jr
J Econ Entom 59(4):849-851, TA8S.
Aug 1966 421 J822
Acrobasis vaccinii, Light traps, Mating,
Reproductive history.

654-67
EFFECT OF 80VINE DIET ON FACE FLY DEVELOPMENT - A PRELIMINARY REPORT.
R E Treece
J Econ Entom 59(1):153-156
Feb 1966 421 J822
Cattle diet, Musca autumnalis, Musca autumnalis De Greer.

655-67
A QUICK TRAP FOR AREA SAMPLING OF ARTHROPODS IN GRASSLAND COMMUNITIES.
A L Turnbull C F Nicholls
J Econ Entom 59(5):1100-1104
Oct 1966 421 J822
Area sampling, Arthropoda, Grassland communities,
Insect traps.

656-67
EFFECTS OF TEMPERATURE AND MOISTURE ON SURVIVAL OF EGGS OF THE TO8ACCO WIREWORM.
S G Turnipseed R L Rabb
J Econ Entom 58(6):1155-I156
Dec 1965 421 J822
Conoderus vespertinus, Conoperus vespertinus (F),
Insect eggs.

657-67
STARVATION METHOD FOR O8TAINING DIAPAUSING 80LL WEEVILS A8LE TO SURVIVE THE WINTER IN HI8ERNATION.
J Econ Entom 59(1):55-57
Feb 1966 421 J822
Anthonomus grandis, Anthonomus grandis, Diapause,
Hibernation, Starvation.

658-67
THE PENETRATION AND META8OLISM OF H-DIMETHOATE IN INSECTS.
T Uchida H S Rahmati R D O 8rien
J Econ Entom 58(5):831-835
Oct 1965 421 J822
Dimethoate, Insects.

669-67
FLORESCENT DYES FOR MATING AND RECOVERY STUDIES WITH CA88AGE LOOPER MOTHS.
P V Vail A F Howland T J Henneberry
J Econ Entom 59(5):I093-I097
Oct 1966 421 J822
Cabbage looper moth, Florescent dyes, Mating,
Recovery study, Rhodamine B., Trichoplusia ni (Hubner).

660-67
REARING OF THE BOLLWORM ON ARTIFICIAL DIET.
E S Vanderzant C D Richardson S W Fort Jr
J Econ Entom 55(1):140
Feb 1962 421 J822

Diet, Heliothis zea, Heliothis zea, Insect rearing.

661-67
FACTORS AFFECTING RESISTANCE OF ALFALFA CLONES TO ADULT FEEDING AND OVIPOSITION OF THE ALFALFA WEEVIL IN THE LABORATORY.
R S VanDenburgh B L Norwood C C Blickenstaff C H Hanson
J Econ Entom 59(5):1193-1198
Oct 1966 421 J822
Alfalfa, Clones, Hypera postica,
Hypera postica (Gyllenhal), Insect feeding, Oviposition.

662-67
INFLUENCE OF FUMIGATION AND AGE ON CARBON DIOXIDE PRODUCTION OF SOME STORED-PRODUCT INSECTS.
L E Vincent D L Lindgren
J Econ Entom 58(4):660-664, TABS.
Aug 1965 421 J822
Carbon dioxide, Insect respiration, Stored products.

663-67
A METHOD OF HOST SELECTION BY CARDIOCHILES NIGRICEPS.
S B Vinson W J Lewis
J Econ Entom 58(5):869-871
Oct 1965 421 J822
Cardiochiles nigriceps, Heliothis virescens,
Heliothis virescens.

664-67
LABORATORY REARING OF THE TOBACCO HORNWORM, PROTOPARCE SEXTA (LEPIDOPTERA: SPHINGIDAE).
G P Waldbauer R T Yamamoto W S Bowers
J Econ Entom 57(1):93-95
Feb 1964 421 J822
Laboratory rearing, Lepidoptera, Manduca quinquemaculata,
Manduca quinquemaculata, Protoparce sexta (Johannson),
Sphingidae.

665-67
EMERGENCE PATTERN OF FIRST-GENERATION BOLL WEEVILS IN AN ISOLATED PLOT DURING 1960 AND 1961.
J K Walker Jr
J Econ Entom 55(5):795-796
Oct 1962 421 J822
Anthonomus grandis, Anthonomus grandis Boheman,
Insect behavior.

666-67
REPRODUCTIVE POTENTIAL OF THE SWEETPOTATO WEEVIL AFTER EXPOSURE TO IONIZING RADIATIONS.
J R Walker
J Econ Entom 59(5):1206-1208
Oct 1966 421 J822
Cylas formicarius elegantulus,
Cylas formicarius elegantulus (Summers), Ionizing radiation,
Reproduction.

667-67
SPRING MIGRATION OF THE SIX-SPOTTED LEAFHOPPER IN THE WESTERN GREAT PLAINS.
R L Wallis
J Econ Entom 55(6):871-874
Dec 1962 421 J822
Insect migration, Macrosteles fascifrons,
Macrosteles fascifrons.

668-67
DEVELOPMENT OF CATTLE GRUBS IN OKLAHOMA CATTLE IMPORTED INTO CANADA.
J Weintraub D E Howell
J Econ Entom 57(4):494-500, TABS.
Aug 1964 421 J822
Canada, Cattle, Hypoderma, Hypoderma bovis (L.),
Hypoderma lineatum (de Villiers), Oklahoma.

669-67
EFFECTS OF PROTOZOAN PARASITES AND COMMENSALS ON LARVAE OF THE MOSQUITO AEDES COMMUNIS (DEGEER) (DIPTERA: CULICIDAE) AT CHURCHILL, MANITOBA.
H E Welch
J Invertebrate Path 2(4):386-395
1960 421 JB26
Aedes communis (DeGeer), Culicidae, Diptera, Larvae,
Manitoba, Parasites, Protozoa, Symbiosis.

670-67
NOTES ON AND CONTROL OF STINK BUGS AFFECTING COTTON IN ARIZONA.
G P Wene L W Sheets
J Econ Entom 57(1):60-62
Feb 1964 421 J822
Arizona, Chlorochroa sayi, Cotton,
Euschistus impictiventris, Insect control, Pentatomidae.

671-67
COMPARISON OF AERIAL SPRAY AND DUST INSECTICIDE APPLICATIONS FOR THE CONTROL OF COTTON INSECTS IN ARIZONA.
G P Wene L W Sheets
J Econ Entom 55(1):147-148
Feb 1962 421 J822
Aerial dusting, Aerial spraying, Cotton, Insect control,
Insecticides.

672-67
MIGRATION OF BEET ARMYWORM LARVAE.
G P Wene L W Sheets
J Econ Entom 58(1):165-169
Feb 1965 421 J822
Insect migration, Spodoptera exigua,
Spodoptera exigua (Hubner).

673-67
THE PAINTED LEAFHOPPER, ENDRIA INIMICA (SAY), A VECTOR OF WHEAT STRIATE MOSAIC VIRUS IN MANITOBA.
P H Westdal H P Richardson
Can Entom 98(9):922-931, TABS.
Sep 1966 421 C16
Endria inimica (Say), Insect vectors, Manitoba,
Striate mosaic (wheat).

674-67
REARING PSEUDOTHERAPTUS WAYI BROWN (COREIDAE) A PEST OF COCONUTS IN EAST AFRICA, EVALUATIONS OF ITS SUSCEPTIBILITY TO VARIOUS INSECTICIDES.
P E Wheatley
Bull Entomol R 51(4):723-729
Jan 1961 421 B87
Coconuts, Coreidae, East africa, Insect rearing,
Insecticides, Pseudotheraptus wayi Brown.

675-67
THE LIFE HISTORY OF PLATYNOTA FLAVEDANA, A LEAF ROLLER OF STRAWBERRY.
G Wilde M Semel
J Econ Entom 59(5):1037-1041
Oct 1966 421 J822
Gonlozus platynotae (Ashmead), Life cycle, New York,
Platynota flavedana Clemens, Tortricidae.

676-67
APANTELES RUBECULA MARSH AND OTHER PARASITES OF PIERIS RAPAE IN BRITISH COLUMBIA.
A T S Wilkinson
J Econ Entom 59(4):1012-1013
Aug 1966 421 J822
Apanteles rubecula (Marsh), British Columbia,
Parasitic Insects, Pieris rapae.

677-67
DEVELOPMENT IN NEODIPRION EXCITANS ROHWER AS RELATED TO OVIPOSITION AND PINE NEEDLE GROWTH.
R C Wilkinson
Can Entom 96(8):1142-1147
Aug 1964 421 C16
Insect morphology, Neodiprion excitans Rohwer, Oviposition.

678-67
A METHOD FOR CANDLING PINE SAWFLY COCOONS.
R C Wilkinson
J Econ Entom 58(3):587
Jun 1965 421 J822
Argidae, Candling, Neodiprion excitans,
Neodiprion virginianus, Pupal cases.

679-67
BIOLOGICAL ACTIVITIES OF THE HARVESTER ANT, POGONOMYRMEX OWYHEEI, IN CENTRAL OREGON.
J R Willard H H Crowell
J Econ Entom 58(3)484-489, BIBL., TABS.
Jun 1965 421 J822
Insect behavior, Messor, Oregon, Pogonomyrmex owyheei Cole.

680-67
LIFE HISTORY, HABITS, AND DAMAGE OF THE BOXELDER LEAF GALL MIDGE, CONTARINIA NEGUNDIFOLIA FELT (DIPTERA: CECIDOMYIIDAE) IN MICHIGAN.
L F Wilson
Can Entom 98(7):777-784
Jul 1966 421 C16
Acer negundo, Acer negundo, Cecidomyiidae,

10 681-67

Contarinia negundifolia Felt, Diptera, Insect behavior, Life cycle, Michigan, Plant injuries.

681-67
ORIENTATION OF THE MALES OF AEDES AEGYPTI (L.) (DIPTERA: CULICIDAE) TO SOUND.
G Wishart G R van Sickle D F Riordan
Can Entom 94(6):613-626, BIBL. 625-626
Jun 1962 421 C16
Aedes aegypti (L.), Culicidae, Culicidae, Diptera, Sex behavior, Stridulation.

682-67
MICROORGANISMS FROM THE MID-CUT OF THE FOURTH-INSTAR LARVAE OF CULEX TARSALIS COQUILLETT.
G A Wistreich J Chao
J Invertebrate Path 2(1):30-34, TABS.
1960 421 JB26
Culex tarsalis Coquillett, Larvae, Microorganisms.

683-67
FURTHER STUDIES OF THE CYTOPLASMIC POLYHEDROSIS VIRUS OF THE ALFALFA CATERPILLAR.
G Wittig E A Steinhaus J P Dineen
J Invertebrate Path 2(4):334-345
1960 421 JB26
Colias philodice eurytheme Boisduval, Polyhedroses.

684-67
A SEQUENTIAL SAMPLING PLAN FOR DETERMINING THE STATUS OF CORN EARWORM CONTROL IN SWEET CORN.
D A Wolfenbarger J G Darroch
J Econ Entom 58(4):651-654, TABS.
Aug 1965 421 J822
Heliothis zea, Heliothis zea (Boddie), Sampling, Sweetcorn.

685-67
OCCURENCE OF EYE GNATS (HIPPELATES SSP.) IN THE CENTRAL SAN JOAQUIN VALLEY, CALIFORNIA.
D J Womeldorf E W Mortenson
J Econ Entom 55(4):457-459
Aug 1962 421 JB22
Chloropidae, Chloropidae, Hippelates, Insect traps, Pest control.

686-67
A COMPARISON OF THE BIOLOGY OF THE SUGARCANE BORER ON ARTIFICIAL AND NATURAL DIETS.
T Wongsiri N M Randolph
J Econ Entom 55(4):472-473
Aug 1962 421 JB22
Culture media, Diatraea saccharalis, Diatraea saccharalis, Diet.

687-67
EVALUATION OF CHEMICALS AS HONEY BEE ATTRACTANTS AND REPELLENTS.
A W Woodrow N Green H Tucker M H Schonhorst K C Hamilton
J Econ Entom 58(6):1094-1102
Dec 1965 421 JB22
Apis mellifera, Apis mellifera, Attractants, Insect repellents.

688-67
INSECTICIDE RESISTANCE TESTS FOR THE SOUTHERN POTATO WIREWORM.
R B Workman
J Econ Entom 56(3):419
Jun 1963 421 JB22
Conoderu falli Lane, Insecticide resistant insects, Southern potato wireworm.

689-67
RESPONSE OF THE NANTUCKET PINE TIP MOTH TO ATTRACTANTS.
C Wray M H Farrier
J Econ Entom 56(5):714-715
Oct 1963 421 J822
Attractants, Rhyacionia frustrana, Rhyacionia frustrana (Comstock).

690-67
PRIMARY ODORS AND INSECT ATTRACTION.
R H Wright
Can Entom 98(10):1083-1093, TABS.
Oct 1966 421 C16
Attractants, Insects, Odors.

691-67
SOME QUANTITATIVE ASPECTS OF INSECT ATTRACTION.
R H Wright
Can Entom 98(10):1114-1117
Oct 1966 421 C16
Attractants, Drosophilia melanogaster, Insects.

692-67
EFFECT OF HOST AGE ON RATE OF DEVELOPMENT OF NASONIA VITRIPENNIS (WALK.) (HYMENOPTERA: PTEROMALIDAE).
H G Wylie
Can Entom 96(7):1023-1027, TABS.
Jul 1964 421 C16
Hymenoptera, Insect morphology, Nasonia vitripennis (Walk.), Pteromalidae.

693-67
SUGARCANE BORER RESISTANCE TO INSECTICIDES.
R P Yadav H L Anderson W H Long
J Econ Entom 58(6):1122-1124
Dec 1965 421 J822
Diatraea saccharalis, Diatraea saccharalis (F), Insecticide resistant insects.

694-67
THE EFFECT OF REPEATED INSECTICIDAL APPLICATIONS ON A NATURAL TSETSE POPULATION.
D Yeo H R Simpson
Bull Entomol R 51(3):631-637
Nov 1960 421 B87
Glossina spp., Insect population, Insecticide application.

695-67
BACTERIOPHAGE FOR BACILLUS THURINGIENSIS BERLINER AND BACILLUS ANTHRACIS COHN.
P E Yoder E L Nelson
J Invertebrate Path 2(2):198-200
1960 421 JB26
Bacillus anthracis Cohn, Bacillus thuringiensis Berliner, Bacteriophages.

696-67
IMPROVED TECHNIQUE FOR REARING THE ALFALFA WEEVIL, HYPERA POSTICA (GYLLENHAL), IN THE LABORATORY.
W H Ziener K D Cashin
J Econ Entom 57(1):161, PL.
Feb 1964 421 J822
Hypera postica, Hypera postica (Gyllenhal), Insect rearing.

Genetics

697-67
EXPLORATORY STUDIES ON GAMMA RADIATION FOR THE STERILIZATION OF THE BOLL WEEVIL.
T B Davich D A Lindquist
J Econ Entom 55(2):164-167, TABS.
Apr 1962 421 JB22
Anthonomus grandis, Anthonomus grandis, Gamma rays, Sterilization.

698-67
OVIPOSITION PREFERENCE OF THE CABBAGE MAGGOT, HYLEMYA BRASSICAE (BOUCHE).
J F Doane R K Chapman
J Econ Entom 55(1):137-138
Feb 1962 421 J822
Hylemya brassicae, Hylemya brassicae, Oviposition.

699-67
TWO GENETIC MARKERS FOR LARVAE OF THE SCREW-WORM FLY.
L W Fletcher
J Econ Entom 59(4):877-880, PL.
Aug 1966 421 J822
Cochliomyia hominovorax, Insect genetics, Larvae.

700-67
SUSCEPTIBILITY OF MATURE AND NEWLY EMERGED FACE FLIES TO CHEMOSTERILIZATION WITH APHOLATE.
J A Hair E C Turner Jr
J Econ Entom 59(2):452-454, BIBL.
Apr 1966 421 J822
Apholate, Insecticide resistant insects, Musca autumnalis,

Musca autumnalis De Geer, Tepa.

701-67
THE EFFECT OF PLANT NUTRITON ON THE FECUNDITY OF TWO STRAINS OF TWO-SPOTTED SPIDER MITE.
T J Henneberry
J Econ Entom 55(1):134-137, TABS.
Feb 1962 421 JB22
Fertility, Plant nutrition, Tetranychus urticae, Tetranychus urticae.

702-67
POTENTIALITIES AND PROGRESS IN THE DEVELOPMENT OF CHEMOSTERILANTS FOR INSECT CONTROL.
E F Knipling
J Econ Entom 55(5):782-786, TABS.
Oct 1962 421 JB22
Chemosterilants, Insect control.

703-67
MUTANTS AND LINKAGE GROUPS OF THE SCREW-WORM FLY.
L E LaChance C Dankins D E Hopkins
J Econ Entom 59(6):1493-1499
Dec 1966 421 J822
Cochliomyia hominivorax, Cochliomyia hominivorax, Insect mutation.

704-67
OVERWINTERING IN THE EGG STAGE BY THE SPOTTED ALFALFA APHID IN NEBRASKA.
G R Manglitz P W Bergman W L Howe C O Calkins
J Econ Entom 55(3):292-294
Jun 1962 421 JB22
Eggs, Hibernation, Therioaphis maculata, Therioaphis maculata.

705-67
A GENETIC FACTOR CONTROLLING COLOR AND ITS ASSOCIATION WITH DDT SENSITIVITY IN THE CABBAGE LOOPER.
F L McEwen C M Spittstoesser
J Econ Entom 57(2):197-199, TABS.
Apr 1964 421 J822
DDT , Insect color, Insect genetics, Trichoplusia ni, Trichoplusia ni.

706-67
THE INHERITANCE OF LARVAL COLOR PATTERNS IN NEODIPRION PRATTI DYAR (HYMENOPTERA: DIPRIONIDAE).
P B Moens C E Atwood
Can Entom 95(7):779-782
Jul 1963 421 C16
Color, Diprionidae, Hymenoptera, Larvae, Neodiprion prattl Dyar.

707-67
CYTOLOGICAL AND GENETIC STUDIES ON THE EFFECT OF RUELENE.
A Nethery G B Wilson R Hooplngarner
J Econ Entom 58(3):511-513
Jun 1965 421 JB22
Cytogenetics, Cytology, Ruelene.

708-67
EGG DEPOSITION BY BOLL WEEVILS ISOLATED FROM MALES DURING HIBERNATION PERIOD AND AFTER SPRING EMERGENCE.
L G Pickens
J Econ Entom 55(2):268-269
Apr 1962 421 JB22
Anthonomus grandis, Anthonomus grandis, Eggs, Hibernation.

709-67
SUPPRESSION OF THE REPRODUCTIVE POTENTIAL OF THE CODLING MOTH BY GAMMA IRRADIATED MALES IN CAGED ORCHARD TREES.
M D Proverbs J R Newton
55(6):934-936
Dec 1962
Carpocapsa pomonella, Carpocapsa pomonella, Gamma rays, Irradiation, Reproduction, Trees.

710-67
MATING COMPETITION OF GAMMA-IRRADIATED AND NONIRRADIATED MALE TROGODERMA GLABRUM HERBST.
E W Tilton W E Burkholder R R Cogburn
J Econ Entom 59(1):168-169
Feb 1966 421 JB22
Gamma rays, Reproduction, Trogoderma glabrum.

Medical Entomology

711-67

A QUANTITATIVE METHOD FOR ASSESSING THE NUISANCE CAUSED BY NON-BITING AQUATIC INSECTS.
P S Corbet
Can Entom 98(7):683-687, TABS.
Jul 1966 421 C16
Aquatic insects, Chironomidae, Ephemerortera, Insect pests, Trichoptera.

712-67
AEDES AEGYPTI FEEDS ON LIZARDS IN PUERTO RICO.
I Fox I G Bayona
J Econ Entom 57(3):417-418
Jun 1964 421 JB22
Aedes aegypti, Insect vectors, Lizards, Puerto Rico.

713-67
A TRIAL USE OF GRASS-MAT PASSAGES IN PROTECTING HUMANS FROM ATTACKS BY TSETSE FLIES.
E A S La Croix
Bull Entomol R 51(4):639-642
Jan 1961 421 BB7
Glossina, Grass-mat passages, Trypanosomiasis.

714-67
AN ECOLOGICAL BASIS FOR THE SUPPRESSION OF HIPPELATES EYE GNATS.
M S Mulla
J Econ Entom 56(6):768-770, BIBL. 770
Dec 1963 421 JB22
Hippelates collusor, Insect ecology.

715-67
RECENT DEVELOPMENTS IN PUBLIC HEALTH ENTOMOLOGY AND THEIR POSSIBLE APPLICATION TO AGRICULTURE.
K D Quarterman
J Econ Entom 57(2):277-281, BIBL. 280-281
Apr 1964 421 JB22
Agriculture, Public health entomology.

20 CROP PROTECTION

716-67
BIBLIOGRAPHY OF REVIEWS, 1949-1959.
Phytopatholo 50(8), PT. 2, 116PP.
Aug 1960 464.8 P56
Bibliography, Phytopathology, Reviews.

717-67
REPORT AND ABSTRACTS OF THE 1959 MEETING OF THE NORTHEASTERN DIVISION OF THE AMERICAN PHYTOPATHOLOGICAL SOCIETY.
Phytopatholo 50(4):239-257
Apr 1960 464.8 P56
Abstracting, Agricultural finance, Agriculture, Biology, Chemical control (pests), Crop reports, Food storage, Fungi, Nematodes, Pest control, Plant disease control, Viruses.

718-67
FARMERS EXPENDITURES FOR PESTICIDES IN 1964.
P Adrilenas T Elcher A Fox
1-10, TABS.
1964
Agricultural economics, Pesticides.
Agricultural Economic Report No. 106

719-67
RELATION OF STRUCTURE TO PHYTOTOXICITY OF s-TRIAZINE HERBICIDES ON COTTON AND WEEDS.
J T Holston Jr C G McWhorter
J Agr Food Ch 11(5):441-443
Sep 1963 381 JB223
Cotton, Herbicides, Phytotoxicity, Weeds.

720-67
PECTIC SUBSTANCES IN FORAGES AND THEIR RELATIONSHIP TO BLOAT.
R Pressey S H Synhorst R S Allen N L Jacobson C P Wilsie
J Agr Food Ch 11(5):396-399
Sep 1963 3B1 J8223
Bloat, Cattle, Forage plants, Pectins.

721-67
TOLERANCE OF SOME IMPORTED VEGETABLES TO METHYL BROMIDE FUMIGATION AND HOT WATER TREATMENTS.
H Roth H H Richardson
J Econ Entom 5B(6):1086-10B9
Dec 1965 421 JB22
Baris lepidil Germar, Fumigation, Imported produce, Methyl bromide, Water treatment.

Diseases

722-67
A FUSARIUM WILT OF TAGETES.
OLSEN, CARL M.
Phytopatholo 50(1):B5
Jan 1960 464.B P56
Fusarium, Tagetes, Wilt.

723-67
STUDIES ON THE PHYTOPHTHORA ROT OF SUGARCANE SEED PIECES IN LOUISIANA.
T van der Zwet I L Forbes R J Steib
Plant Dis R 44(7):519-523
15 Jul 1960 1.9 P69P
Phytophthora, Rot (sugarcane), Seeds, Sugarcane.

724-67
RACES OF HEAD SMUT OF SORGHUM.
I A Al-Isohaily C J Mankin
Phytopatholo 50(9):627
Sep 1960 464.8 P56
Head smut (sorghum), Sorghum.

725-67
INACTIVATION OF TMV FROM TOMATO SEED.
L J Alexander
Phytopatholo 50(9):627
Sep 1960 464.8 P56
Mosaic (tobacco), Tomatoes.

726-67
ALFALFA MOSAIC VIRUS IN SOYBEAN.
W B Allington E L Moorhead R Staples
Phytopatholo 50(9):627
Sep 1960 464.8 P56
Alfalfa, Macrosiphum pisi, Mosaic (alfalfa), Soybeans.

727-67
HALF-LIFE OF EFFECTIVENESS AGAINST STEM RUST OF SYSTEMIC CHEMICALS IN WHEAT SEEDLINGS.
A S Andersen J B Rowell
Phytopatholo 50(9):627
Sep 1960 464.8 P56
Chemical control (plant diseases), Half-life, Puccinia graminis var. tritici, Seedlings, Stem rust (wheat), Wheat.

728-67
PATHOGENIC SPECIALIZATION OF HELMINTHOSPORIUM SATIVUM.
L J Ashworth Jr K A Lahr R J Collins
Phytopatholo 50(9):627
Sep 1960 464.8 P56
Helminthosporium sativum.

729-67
VIRULENCE OF PSEUDOMONAS SOLANACEARUM AS INFLUENCED BY PROPORTION OF VIRULENT TO AVIRULENT CELLS.
C W Averre III a Kelman
Phytopatholo 50(9):627-628
Sep 1960 464.8 P56
Pseudomonas solanacearum, Virulence.

730-67
FIELD OCCURRENCE OF TOBACCO MOSAIC VIRUS IN TOMATO AND CHENOPODIUM MURALE.
J G Bald A O Paulus
Phytopatholo 50(9):628
Sep 1960 464.8 P56
Chenopodium murale, Mosaic (tobacco), Tomatoes.

731-67
THE ANTIGENIC CHARACTERISTICS AND THE RELATIONSHIP AMONG STRAINS OF ALFALFA MOSAIC VIRUS.
J B Bancroft E L Moorhead J Tuite H P Liu
Phytopatholo 50(1):34-39
Jan 1960 464.8 P56
Antigens, Mosaic (alfalfa).

732-67
LOPHODERMIUM NEEDLE CAST OF THE EASTERN WHITE PINE.
W M Banfield
Phytopatholo 50(9):628
Sep 1960 464.8 P56
Lophodermium apothecia, Needle cast (pinus), Pinus strobus.

733-67
A BIOCHEMICAL RESPONSE OF APPLE TISSUES TO FUNGUS INFECTION.
E H Barnes E B Williams
Phytopatholo 50(11):844-846
Nov 1960 464.8 P56
Apples, Fungi, Tissues.

734-67
ISOLATION OF OLPIDIUM BRASSICAE FROM ROOTS OF LETTUCE SHOWING BIG-VEIN SYMPTOMS.
J T Barr
Plant Dis R 44(8):617
15 Aug 1960 1.9 P69P
Big vein (lettuce), Lettuce, Microorganism isolation, Olpidium brassicae, Roots.

735-67
SUSCEPTIBILITY OF VARIOUS APPLE VARIETIES TO THE OAK WILT FUNGUS.
G J Bart
Phytopatholo 50(2):177-178
Feb 1963 464.8 P56
Apples, Wilt (oak).

736-67
THE INFLUENCE OF PH ON GROWTH OF THIELAVIOPSIS BASICOLA IN CULTURE AND THE DEVELOPMENT OF THIELAVIOPSIS ROOT ROTS OF POINSETTA AND BEAN IN SOIL.

D P Bateman
Phytopatholo 50(9):62B
Sep 1960 464.B P56
Beans, Culture media, Euphorbia pulcherrima, Hydrogen-ion concentration, Thielaviopsis basicola.

737-67
OCCURRENCE OF THE SCLEROTIAL STATE OF CIBORINIA CANDOLLEANA (LEV.) WHET IN THE UNITED STATES OF AMERICA.
L R Batra J M Staley
Plant Dis R 44(6):430-431
15 Jun 1960 1.9 P69P
Ciborinia candolleana (Lev.. Whet, Quercus, Quercus, Sclerotia.

738-67
THE EFFECTS OF TEMPERATURE AND MOISTURE ON DEVELOPMENT OF BLACK STEM OF ALFALFA.
G A Bean B L Renfro
Phytopathoio 50(9):62B
Sep 1960 464.B P56
Alfalfa, Black stem (alfalfa), Humidity, Temperature.

739-67
PHYSICAL BARRIERS IN RELATION TO FUSARIUM WILT RESISTANCE IN BANANAS.
C H Beckman M E Mace S Halmos
Phytopatholo 50(9):62B
Sep 1960 464.B P56
Bananas, Fusarium, Physical barriers, Wiit (bananas).

740-67
THE EFFECT OF ENVIRONMENT ON GERMINATION OF SPORIDIA IN CRONARTIUM RIBICOLA.
R V Bega
Phytopathoio 50(1):61-69
Jan 1960 464.B P56
Cronartium ribicola, Environment, Seed germination, Sporidia.

741-67
THERMAL DEATH RANGE OF SCLEROTIA OF MACROPHOMINA PHASEOLI.
R V Bega R S Smith
Phytopatholo 50(9):62B-629
Sep 1960 464.B P56
Macrophomina phaseoli, Pinus iambertiana, Pseudotsuga menziesii, Sclerotia, Sequoia gigantea, Thermal death range.

742-67
CARBOHYDRATE RESERVES IN GRAFTED PLANTS OF POTATO VARIETIES RESISTANT TO VIRUS X.
A P Benson W J Hooker
Phytopathoio 50(9):629
Sep 1960 464.B P56
Carbohydrates, Plant grafting, Potatoes.

743-67
COMPARISON OF CULTURAL VARIANTS OF ALTERNARIA SESAME.
S Z Berry
Phytopathoio 50(4):29B-304, BIBL. 303-304
Apr 1960 464.B P56
Alternaria, Culture media, Pathogenicity, Sesame.

744-67
GREEN PEACH APHID DISTRIBUTION AND POTATO LEAFROLL VIRUS OCCURRENCE IN THE SEED-POTATO PRODUCING AREAS OF IDAHO.
G W Bishop
J Econ Entom 5B(1):150-153
Feb 1965 421 JB22
Idaho, Myzus persicae, Myzus persicae (Sulzer), Potato ieafroil virus, Seed potatoes.

745-67
LOCAL LESIONS IN PSOROSIS.
A A Bitancourt
Int Organ Citrus Virol Pr 3:14B-149
1963 464.06 INB2
Lesions (plants), Psorosis.

746-67
BEHAVIOR OF SOME BARTLETT PEAR TREES ON THEIR OWN ROOTS.
E C Blodgett M D Aichele
Plant Dis R 44(6):438-440
15 Jun 1960 1.9 P69P
Bartlett pears, Pears, Roots.

747-67
A SOIL INFESTATION METHOD FOR STUDYING SPORES OF HELMINTHOSPORIUM SATIVUM.
M A Boosalis
Phytopatholo 50(11):B60-B65
Nov 1960 464.B P56
Fungi, Heiminthosporium sativum.

748-67
CROSS-INOCULATION OF TOMATO AND CORN WITH GIBBERELLA.
C W Boothroyd
Phytopatholo 50(4):239
Apr 1960 464.B P56
Corn, Gibberellins, Immunization, Tomatoes.

749-67
DISTRIBUTION OF CERATOCYSTIS FAGACEARUM IN ROOTS OF WILT-INFECTED OAKS IN NORTH CAROLINA.
J S Boyce Jr
Phytopatholo 50(10):775-776
Oct 1960 464.B P56
Ceratocystis fagacearum, North Carolina, Wilt (oak).

750-67
EFFECTS OF SALTS, DETERGENT, AND A BARLEY-JUICE FACTOR ON STABILITY OF BARLEY STRIPE MOSAIC VIRUS.
M K Brakke
Phytopatholo 50(9):629-630
Sep 1960 464.B P56
Barley-juice, Detergents, Salts, Stripe mosaic (barley).

751-67
THE HELMINTHOSPORIUM GRAMINEUM COMPLEX AND RELATED SPECIES ON CEREALS AND FORAGE GRASSES.
S W Braverman
Phytopatholo 50(10):6BB-691
Oct 1960 464.B P56
Forage plants, Grain, Helminthosporium gramineum.

752-67
HELMINTHOSPORIUM DICTYOIDES AND RELATED SPECIES ON FORAGE GRASSES.
S W Braverman J H Graham
Phytopathoio 50(10):691-695, TABS.
Oct 1960 464.B P56
Forage plants, Fungus diseases (plants), Helminthosporium dictyoides.

753-67
INDUCED SUSCEPTIBILITY OF WHEAT AND BARLEY TO OAT CROWN AND STEM RUST FUNGI.
J A Browning
Phytopatholo 50(9):630
Sep 1960 464.B P56
Barley, Crown rust (oats), Stem rust (oats), Wheat.

754-67
STRAINS OF PSEUDOMONAS SOLANACEARUM IN INDIGENOUS HOSTS IN BANANA PLANTATIONS OF COSTA RICA, AND THEIR RELATIONSHIP TO BACTERIAL WILT OF BANANAS.
I W Buddenhagen
Phytopatholo 50(9):660-664
Sep 1960 464.B P56
Bacterial wilt (bananas), Bananas, Costa rica, Plantations, Pseudomonas solanacearum.

755-67
SOME OBSERVATIONS ON ERWINIA TRACHEIPHILA, THE CAUSAL AGENT OF THE CUCURBIT WILT.
W H Burkholder
Phytopatholo 50(2):179-1B0
Feb 1960 464.B P56
Erwinia tracheiphila, Wilt (cucurbit).

756-67
A BACTERIAL BROWN ROT OF PARSNIP ROOTS.
W H Burkholder
Phytopatholo 50(4):2B0-2B2
Apr 1960 464.B P56
Brown rot (parsnips), Parsnips, Roots.

757-67
CERCOSPORA BUNCHOSIAE, A NEW LEAFSPOT DISEASE OF BARBADOS CHERRY.
H C Burnett J R McMarlin
Plant Dis R 44(7):505
15 Jul 1960 1.9 P69P
Barbados cherry, Cercospora bunchosiae, Leaf spot (cherries).

20 758-67

758-67
PATHOGENICITY AND TAXONOMY OF GEOTRICHUM CANDIDUM.
E E Butler
Phytopatholo 50(9):665-672, BIBL.,672
Sep 1960 464.8 P56
Geotrichum candidum, Rot (tomatoes), Tomatoes.

759-67
VARIABILITY OF CACHEXIA REACTIONS AMONG VARIETIES OF ROOTSTOCKS AND WITHIN CLONAL PROPAGATIONS OF CITRUS.
E C Calavan D W Christiansen
Int Organ Citrus Virol Pr 3:76-85
1963 464.06 IN82
Cachexia (citrus), Citrus, Roostock.

760-67
LOSSES TO WINTER WHEAT FROM INFECTION BY SEPTORIA TRITICI.
R M Caldwell I Narvaes
Phytopatholo 50(9):630
Sep 1960 464.8 P56
Crop losses, Septoria tritici, Wheat.

761-67
GROWTH AND SPORULATION OF GUIGNARDIA BIDWELLII IN PURE CULTURE AND IN THE FIELD.
P G Caltrider
Phytopatholo 50(9):630
Sep 1960 464.8 P56
Culture media, Guignardia bidwellii, Land.

762-67
FROZEN-LIMA-BEAN AGAR FOR CULTURE AND STORAGE OF PHYTOPHTHORA SOJAE.
O H Calvert L F Williams M D Whitehead
Phytopatholo 50(27):136-137
Feb 1960 464.8 P56
Agar, Culture media, Lima-bean agar, Phytophthora sojae, Soybeans, Storage.

763-67
INFECTION OF PEAR ROOTS WITH PHYTOPHTHORA CINNAMOMI.
H R Cameron
Phytopatholo 50(9):630
Sep 1960 464.8 P56
Pears, Phytophthora cinnamomi.

764-67
SUSCEPTIBILITY OF MAZZARD SEEDLINGS TO PSEUDOMONAS SYRINGAE.
R H Cameron
Phytopatholo 50(1):82
Jan 1960 464.8 P56
Mazzard seedlings, Pseudomonas syringae.

765-67
SOME SAP-STAIN FUNGI FOUND IN MINNESOTA.
R N Campbell
Plant Dis R 44(8):625-628, BIBL. 627-628
15 Aug 1960 1.9 P69P
Fungi, Minnesota, Sap stain (wood), Sapwood.

766-67
PRESENCE OF SEEDLING YELLOWS COMPLEX IN THE CITRUS OF SOUTH INDIA.
S P Capoor
Int Organ Citrus Virol Pr 3:30-35
1963 464.06 IN82
Citrus, India, Seedling yellows (citrus), Tristeza (citrus).

767-67
EVALUATION OF SOIL FUNGICIDES AGAINST FUSARIUM SOLANI ISOLATED FROM FEEDER ROOTS OF CITRUS TREES.
R C Cetas R Whidden
Plant Dis R 44(7):465-469
15 Jul 1960 1.9 P69P
Citrus, Fungicides, Fusarium solani, Roots.

768-67
STUDIES OF ALTERNARIA SPP. PATHOGENIC ON CRUCIFERAE.
W Changsri G F Weber
Phytopatholo 50(9):631
Sep 1960 464.8 P56
Alternaria brassicae, Alternaria brassicola, Alternaria raphani, Cruciferae.

769-67
THE MECHANISM OF WILTING INCITED BY FUSARIUM IN RED CLOVER.
C C Chi E W Hanson
Phytopatholo 50(9):631
Sep 1960 464.8 P56
Fusarium oxysporum, Fusarium solani, Red clover, Wilt (red clover).

770-67
EFFECTS OF STREPTOMYCES AND TRICHODERMA ON FUSARIUM.
C C Chi
Phytopatholo 50(9):631
Sep 1960 464.8 P56
Fusarium, Streptomyces, Trichoderma.

771-67
EXPERIMENTAL EVIDENCE THAT CACHEXIA AND XYLOPOROSIS ARE CAUSED BY THE SAME VIRUS.
J F L Childs J L Eichhorn L E Kopp R E Johnson
Int Organ Citrus Virol Pr 3:61-69, TABS.
1963 464.06 IN82
Cachexia (citrus), Xylioporosis (citrus).

772-67
THE QUESTION OF SEED TRANSMISSION OF CACHEXIA-XYLOPOROSIS VIRUS.
J F L Childs R E Johnson J L Eichhorn
Int Organ Citrus Virol Pr 3:90-94
1963 464.06 IN82
Cachexia (citrus), Plant disease transmission, Seed analysis, Xylioporosis (citrus).

773-67
DATURA STRAMONIUM AND CHENOPODIUM HYBRIDUM AS SEMIQUANTITATIVE ASSAY HOSTS FOR BROMEGRASS MOSAIC VIRUS.
R Chiu W H Slii Jr.
Phytopatholo 50(9):632
Sep 1960 464.8 P56
Bromus, Chenopodium hybridum, Datura stramonium, Mosaic (bromus).

774-67
WINTER OUTBREAKS OF CITRUS BROWN ROT IN FLORIDA.
M Cohen L C Knorr
Plant Dis R 44(7):578-579
15 Jul 1960 1.9 P69P
Brown rot (citrus), Citrus.

775-67
THE BLACK VINE WEEVIL BRACHYRHINUS SULCATUS, AS A PEST OF GRAPES IN SOUTH CENTRAL WASHINGTON.
W W Cone
J Econ Entom 56(5):677-680, TABS.
Oct 1963 421 J822
Brachyrhinus sulcatus, Brachyrhinus suicatus (F.), Grapes, Washington.

776-67
LESION TYPE AS A MEANS OF EVALUATING BARLEY LINES FOR RESISTANCE TO HELMINTHOSPORIUM SATIVUM.
R J Cook
Phytopatholo 50(9):632
Sep 1960 464.8 P56
Barley, Helminthosporium sativum, Plant disease resistance.

777-67
PURIFICATION BY DENSITY-GRADIENT CENTRIFUGATION, ELECTRON MICROSCOPY, AND PROPERTIES OF CYMBIDIUM MOSAIC VIRUS.
M K Corbett
Phytopatholo 50(5):346-351, BIBL. 350-351
May 1960 464.8 P56
Centrifugation, Electron microscopy, Mosaic (cymbidium).

778-67
SUITABILITY OF ORYZA AND OTHER GRASSES AS HOSTS OF SOGATA ORIZICOLA MUIR.
A D Cordero L D Newson
J Econ Entom 55(6):868-871
Dec 1962 421 J822
Grasses, Oryza, Sogata orizicola Muir.

779-67
BROAD SPECTRUM FUNGICIDES TESTED FOR CONTROL OF MELTING-OUT OF KENTUCKY BLUEGRASS AND SCLEROTINIA DOLLAR SPOT OF SEASIDE BENTGRASS.
H B Couch L D Moore
Plant Dis R 44(7):506-509
15 Jul 1960 1.9 P69P
Agrostis palustris, Dollar spot (grasses), Fungicides, Melting out (Kentucky bluegrass), Poa pratensis, Poa pratensis, Sclerotinia.

780-67
HISTOLOGICAL STUDIES ON PENETRATION OF PEA ROOTS BY ZOOSPORES OF APHANOMYCES EUTEICHES.
J L Cunningham D J Hagedorn
Phytopatholo 50(9):632
Sep 1960 464.8 P56
Aphanomyces euteiches, Peas, Plant histology, Zoospores.

781-67
RUSTY SPOT OF PEACH AND ITS CONTROL IN NEW JERSEY.
R H Daines C M Haenseler E Brennan I A Leone
Phytopatholo 50(4):239
Apr 1960 464.8 P56
Peaches, Rusty spot (peaches).

782-67
SEVERAL SPECIES OF PHOLIOTA ASSOCIATED WITH ROOT AND BUTT ROTS OF ROCKY MOUNTAIN CONIFERS.
R W Davidson
Phytopatholo 50(9):633
Sep 1960 464.8 P56
Bud rot (coniferae), Conlferae, Phollota adiposa, Phollota alnicola, Phollota squarrosa, Rocky mountains, Root rot (conlferae).

783-67
CHEMOTHERAPY OF CEREAL RUSTS WITH A NEW ANTIBIOTIC.
D Davis L Chalet J W Rothrock J Deak S Halmos J D Garber
Phytopatholo 50(11):841-843
Nov 1960 464.8 P56
Antlbiotlcs, Cereal rusts, Plant chemotherapy.

784-67
CLONES OF RED CLOVER RESISTANT TO FOUR ISOLATES OF BEAN YELLOW MOSAIC VIRUS.
S Dlachun L Henson
Phytopatholo 50(4):323-324
Apr 1960 464.8 P56
Clones, Mosalc (bean yellow), Red clover.

785-67
A POPULATION OF SELF-FERTILE RED CLOVER NECROTIC-SPOTTING WITH A STRAIN OF BEAN YELLOW MOSAIC VIRUS.
S Dlachun L Henson
Phytopatholo 50(9):633
Sep 1960 464.8 P56
Necrotlc-spottlng (red clover), Populatlon, Red clover, Yellow mosalc (beans).

786-67
INSECTICIDE TREATMENTS FOR APHID CONTROL IN RELATION TO SPREAD OF BARLEY YELLOW DWARF VIRUS.
E A Dlckason W B Raymer W H Foote
Plant Dls R 44(7):501-504
15 Jul 1960 1.9 P69P
Aphidldae, Barley, Insecticides, Yellow dwarf (barley).

787-67
THE EFFECTS OF ENVIRONMENTAL CONDITIONS ON THE GROWTH OF MERULIUS LACRYMANS.
J D Dlller E J Koch
Phytopatholo 50(9):633-634
Sep 1960 464.8 P56
Envlronment, Merulius lacrymans.

788-67
EFFECT OF STEM GIRDLING OF CITRUS SEEDLINGS ON SIZE OF PHYTOPHTHORÅ GUMMOSIS LESIONS.
J E Dimitman L J Klotz
Phytopatholo 50(1):83
Jan 1960 464.8 P56
Citrus, Phytophthora gummosls, Seedllngs, Tree control.

789-67
VEGETATIVE GROWTH OF PHYTOPHTHORA SPP. ON DIFFERENTIAL SYNTHETIC MEDIA AS AN AID IN SEPARATING ISOLATES PATHOGENIC TO CITRUS.
J E Dimitman G A Zentmyer
Phytopatholo 50(1):83
Jan 1960 464.8 P56
Cltrus, Culture media, Phytophthora spp..

790-67
MECHANICS OF WATER TRANSPORT IN HEALTHY AND FUSARIUM-WILTED TOMATO PLANTS.
A E Dimond L V Edgington
Phytopatholo 50(9):634
Sep 1960 464.8 P56
Fusarium, Tomatoes, Water consumptive use, Wllt (tomatoes).

791-67
BACTERIAL PATHOGENS OF SCOLYTUS MULTISTRIATUS MARSHAM AS RELATED TO CROWDING.
C C Doane
J Invertebrate Path 2(1):24-29
1960 421 J826
Bacterial diseases (plants), Scolytus multlstrlatus Marsham.

792-67
TWO VIRUSES THAT INDUCE SYMPTOMS TYPICAL OF JUNE YELLOWS IN LETTUCE.
J E Duffus
Plant Dls R 44(6):406-408
15 Jun 1960 1.9 P69P
June yellows (lettuce), Lettuce, Vlruses.

793-67
RADISH YELLOWS, A DISEASE OF RADISH, SUGAR BEET AND OTHER CROPS.
J E Duffus
Phytopatholo 50(5):389-394
May 1960 464.8 P56
Aphldldae, Lettuce, Radlsh yellows vlrus, Radlshes, Splnach, Sugarbeets.

794-67
QUARANTINE PROBLEMS ASSOCIATED WITH THE IMPORTATION OF BANANAS FROM MEXICO.
R B Eads E G Campos H A Trevlno
J Econ Entom 59(4):896-899
Aug 1966 421 J822
Bananas, Forelgn trade, Mexlco, Quarantlne.

795-67
EVALUATION OF AMMONIA-GENERATING FORMULATIONS FOR CONTROL OF CITRUS FRUIT DECAY.
J W Eckert M J Kolbezen
Phytopatholo 50(9):634
Sep 1960 464.8 P56
Ammonium, Citrus, Fruit decay.

796-67
HOST RANGE, PATHOGENICITY, AND TAXONOMY OF ASCOCHYTA IMPERFECTA.
L K Edmunds I W Hanson
Phytopatholo 50(2):105-108
Feb 1960 464.8 P56
Alfalfa, Ascochyta lmperfecta, Host range, Pathogenlcty, Red clover, Taxonomy.

797-67
A VIRUS DISEASE OF HIBBERTIA SCANDENS.
R M Endo
Phytopatholo 50(9):634
Sep 1960 464.8 P56
Hlbbertia scandens, Vlrus dlseases (plants).

798-67
VARIATION IN ISOLATES OF PSEUDOMONAS ASSOCIATED WITH BLAST AND CANKER OF FRUIT TREES IN CALIFORNIA.
H English J R Davis
Phytopatholo 50(1):84
Jan 1960 464.8 P56
Blast, Callfornla, Canker (fruit), Pseudomonas.

799-67
THE SOURCE OF INOCULUM FOR BACTERIAL CANKER AND BLAST OF STONE FRUIT TREES.
H English J R Davis
Phytopatholo 50(9):634
Sep 1960 464.8 P56
Bacterlal canker (frult), Blast (frult), Fruit, Inoculum, Pseudomonas syringae.

800-67
LOSS CAUSED BY LATE INFECTION OF CANTALOUPES BY THE CURLY TOP VIRUS.
R A Flock E F Laird Jr R C Dlckson
Phytopatholo 50(4):326-327
Apr 1960 464.8 P56
Cantaloupes, Curly top (cantaloupes).

801-67
ASEXUAL VARIANTS OF MELAMPSORA LINI.
H H Flor
Phytopatholo 50(3):223-226
Mar 1960 464.8 P56
Asexual reproduction, Melampaora llni, Plant genetlcs, Uredlnales, Uredlnales.

20 802-67

802-67
THE RESPONSE OF CORN TO INOCULATION WITH DIPLODIA ZEAE AND GIBBERELLA ZEAE.
D C Foley
Phytopatholo S0(2):I46-I50 TABS.
Feb I960 464.8 PS6
Corn, Diplodia zeae, Gibberella zeae, Immunization.

803-67
VIRUSLIKE PARTICLES ASSOCIATED WITH THE RATOON STUNTING DISEASE OF SUGARCANE.
I L Forbes K C Ling
Phytopatholo S0(9):63S
Sep 1960 464.8 PS6
Ratoon stunt (sugarcane), Sugarcane.

804-67
STUDIES OF THE HOST SPECIFICITY OF VERTICILLIUM ALBO-ATRUM VAR. MENTHAE.
C Fordyce R J Green
Phytopatholo S0(9):63S
Sep 1960 464.8 P56
Host specificity, Verticillium albo-atrum var. menthae.

805-67
DIFFERENTIAL TRANSMISSION OF FOUR STRAINS OF STRAWBERRY VEIN BANDING VIRUS BY FOUR APHID VECTORS.
N W Frazier
Plant Dis R 44(6):436-437
15 Jun 1960 I.9 P69P
Aphididae, Insect vectors, Plant disease transmission, Strawberries, Vein banding (strawberries).

806-67
EFFECT OF SOFT ROT BACTERIA AND PECTOLYTIC ENZYMES ON ELECTRICAL CONDUCTANCE OF WITLOOF CHICORY TISSUE.
B A Friedman M J Jaffe
Phytopatholo S0(4):272-274
Apr I960 464.8 PS6
Electric conductivity, Endive, Pectolytic enzymes, Soft rot (chicory), Witloof chicory.

807-67
BOTRYOSPHAERIA RIBIS AND ITS RELATION TO A ROT OF APPLES.
J F Fulkerson
Phytopatholo S0(5):394-398
May I960 464.8 PS6
Botryosphaeria ribis, Rot (apples).

808-67
PATHOGENICITY AND STABILITY OF STRAINS OF CORYNEBACTERIUM INSIDIOSUM.
J F Fulkerson
Phytopatholo S0(5):377-380, BIBL. 379-380
May I960 464.8 PS6
Corynebacterium insidiosum.

809-67
SEROLOGICAL DIFFERENTIATION OF PRUNE DWARF AND SOUR CHERRY NECROTIC RINGSPOT VIRUSES.
R W Fulton R I Hamilton
Phytopatholo S0(9):63S-636
Sep 1960 464.8 PS6
Necrotic ring spot (cherries), Prune dwarf (cherries), Serological tests, Sour cherries.

810-67
PRODUCTION OF NEW RACES OF PUCCINIA GRAMINIS VAR. TRITICI BY TISSUE TRANSPLANTS.
W N Garrett
Phytopatholo 50(9):636
Sep 1960 464.8 P56
Inoculum, Puccinia graminis var. tritici, Tissue transplants.

811-67
INFLUENCE OF NITROGEN AND POTASSIUM NUTRITION LEVELS ON THE DEVELOPMENT OF FUSARIUM SYSTEMIC WILT OF CARNATIONS.
E C Gasiorkiewicz
Phytopatholo 50(9):636
Sep 1960 464.8 PS6
Dianthus caryophyllus, Fusarium, Nitrogen, Plant nutrition, Potassium, Wilt (carnations).

812-67
SOME METABOLIC CHANGES IN WHEAT DUE TO STEM RUST INFECTION AND DIFFERENT TEMPERATURES.
D L Gerwitz R D Durbin
Phytopatholo 50(9):636
Sep I960 464.8 P56
Plant metabolism, Puccinia graminis var. tritici, Stem rust (wheat), Temperature, Wheat.

813-67
RELATIVE INFECTION POTENTIALS OF ROOTSTOCK AND SCION IN INCREASING VIRUS INCIDENCE IN THE DECIDUOUS TREE FRUIT NURSERY.
R M Gilmer K D Brase
Phytopatholo S0(4):1240
Apr I960 464.8 PS6
Deciduous tree fruits, Viruses.

814-67
RECOVERY OF X-DISEASE VIRUS FROM NATURALLY INFECTED MILKWEEDS.
R M Gilmer
Phytopatholo S0(9):636
Sep 1960 464.8 PS6
Asclepias, Virus diseases (plants).

815-67
A TOBACCO-NECROSIS-LIKE VIRUS ISOLATED FROM POTATO-TUBER LESIONS AND CALIFORNIA SOILS.
A H Gold
Phytopatholo S0(I):84
Jan 1960 464.8 PS6
California soil, Potato-tuber, Tobacco, Viruses.

816-67
MORPHOLOGY AND HOST RANGE OF A SUBTERRANEAN MEMBER OF THE MELIOLACEAE.
C C Gordon C G Shaw J D Menzies
Phytopatholo S0(I):84
Jan 1960 464.8 PS6
Host range, Meliolaceae, Plant morphology, Subterranean.

817-67
FORMATION OF LOCAL LESIONS ON GOMPHRENA GLOBOSA BY VIRUSES FROM RED CLOVER.
R W Goth R D Wilcoxson
Phytopatholo S0(9):636-637
Sep 1960 464.8 P56
Gomphrena globosa, Red clover, Viruses.

818-67
PATHOGENICITY AND MORPHOLOGY OF SOME LEGUMINICOLOUS AND RELATED SPECIES OF STEMPHYLIUM.
J H Graham K E Zeiders
Phytopatholo S0(10):7S7-760
Oct I960 464.8 PS6
Plant hosts, Stemphylium.

819-67
RAPID SCREENING OF ALFALFA FOR RESISTANCE TO CORYNEBACTERIUM INSIDIOSUM BY INOCULATING PETIOLES.
J H Graham
Phytopatholo S0(9):637
Sep 1960 464.8 PS6
Alfalfa, Corynebacterium insidiosum, Immunization, Petioles, Plant disease resistance.

820-67
RELATIONSHIP BETWEEN INJURY BY THE CLOVER ROOT CURCULIO AND INCIDENCE OF FUSARIUM ROOT ROT IN LADINO WHITE CLOVER.
J H Graham R C Newton
Plant Dis R 44(7):S34-S35
15 Jul 1960 1.9 P69P
Fusarium, Ladino clover, Plant injuries, Root rot (clover), Sitona hispidula, Sitona hispidula, White clover.

821-67
ON THE RESISTANCE OF TOMATO VARIETIES TO CLADOSPORIUM FULVIUM.
B R Grant J Kuc
Phytopatholo 50(9):637
Sep 1960 464.8 PS6
Cladosporium fulvium, Plant disease resistance, Tomatoes.

822-67
INFECTIOUS VARIEGATION OF CITRUS FOUND IN FLORIDA.
T J Grant P F Smith
Plant Dis R 44(6):426-429
15 Jun I960 1.9 P69P
Citrus, Grapefruit, Variegation.

823-67
THE AMOUNT OF VERTICILLIUM ALBO-ATRUM IN IDAHO CERTIFIED POTATO SEED.
J W Guthrie
Phytopatholo S0(I):84

Jan 1960 464.8 P56
Idaho, Potato seeds, Verticillium albo-atrum.

824-67
NATURE OF PARTIAL RESISTANCE OF THREE SPECIES OF POTATOES TO PHYTOPHTHORA INFESTANS.
J Guzman N H D Thurston L E Heidrick
Phytopatholo 50(9):637
Sep 1960 464.B P56
Phytophthora infestans, Plant disease resistance, Potatoes.

825-67
AN ANGULAR LEAF SPOT OF MAGNOLIA GRANDIFLORA CAUSED BY ISARIOPSIS SP.
F A Haasis C S Hodges
Phytopatholo 50(9):637
Sep I960 464.B P56
Angular leafspot (magnolia), Isariopsis, Magnolia grandiflora.

826-67
THE EFFECT OF TEMPERATURE ON SOME ENTOMOPHTHORACEOUS FUNGI.
I M Hall J V Bell
J Invertebrate Path 2(3):247-253
1960 421 JB26
Entomophthoraceae, Fungi, Temperature.

827-67
SEROLOGICAL AND BIOLOGICAL PROPERTIES OF BROME MOSAIC VIRUS ANTIGENS.
R I Hamilton
Phytopatholo 50(9):63B
Sep 1960 464.B P56
Antigens, Mosaic (bromus), Serological tests.

828-67
THE SELECTIVE EFFECT OF THE ANTIBIOTIC PIMARICINE UPON GROWTH OF SEVERAL CACAO FUNGI IN VITRO.
A J Hansen
Phytopatholo 50(9):638
Sep 1960 464.B P56
Antibiotics, Cacao, Pimaricine.

829-67
SOME EFFECTS OF PH AND MILK ON TOBACCO MOSAIC VIRUS.
W W Hare G B Lucas
Phytopatholo 50(9):638
Sep 1960 464.8 P56
Hydrogen-ion concentration, Milk, Mosaic (tobacco).

830-67
A GENETIC ABNORMALITY IN AN IDAHO CLONE OF FRAGARIA VESCA.
A W Helton
Plant Dis R 44(7):546-549, PL.
I5 Jul 1960 1.9 P69P
Abnormalities, Clones, Fragaria vesca, Genetics, Strawberries.

831-67
AN IMPROVED METHOD OF SELECTING AND BREEDING FOR ACTIVE VECTORS OF HOJA BLANCA VIRUS.
R D Hendrick T R Everett H A Lamey W B Showers
J Econ Entom 58(3):539-542
Jun 1965 42I J822
Hoja blanca (rice), Insect vectors, Sogata orizicola Muir.

832-67
SCLEROTINA BLIGHT OF GLOXINIA.
F F Hendrix Jr R D Raabe
Phytopatholo 50(9):638
Sep 1960 464.8 P56
Gloxinia, Sclerotinia sclerotiorum, Sinningia speciosa.

833-67
A TECHNIQUE FOR DETERMINING THE REACTION OF SEEDLING PLANTS TO THIELAVIOPSIS BASICOLA.
L Henson G W Stokes
Phytopatholo 50(9):63B
Sep 1960 464.B P56
Seedlings, Thielaviopsis basicola.

834-67
THE FEATHERY MOTTLE VIRUS COMPLEX OF SWEETPOTATO.
E M Hildebrand
Phytopatholo 50(10):751-756, BIBL.756-757, TABS.
Oct 1960 464.B P56
Leaf spot (sweetpotatoes), Sweetpotato feathery mottle, Yellow dwarf (sweetpotatoes).

835-67
FACTORS AFFECTING GERMINABILITY OF UREDIOSPORES OF PUCCINIA CORONATA.
E L Hobbs
Phytopatholo 50(9):639
Sep 1960 464.B P56
Crown rust (oats), Puccinia coronata, Seed germination, Urediospores.

836-67
DOMINANCE OF AVIRULENCE AND MONOGENIC CONTROL OF VIRULENCE IN RACE HYBRIDS OF USTILAGO AVENAE.
C S Holton P M Halisky
Phytopatholo 50(10):766-770, TABS.
Oct 1960 464.8 P56
Fungi genetics, Fungus diseases (plants), Ustilaginales, Ustilaginales.

837-67
THE EFFECTS OF TEMPERATURE AND MOISTURE ON OAK WILT DEVELOPMENT.
D R Houston J E Kuntz
Phytopatholo 50(9):640
Sep 1960 464.8 P56
Humidity, Quercus, Temperature, Wilt (oak).

838-67
SUPERFICIAL SCALD, A FUNCTIONAL DISORDER OF STORED APPLES. II. PROMOTERS AND INHIBITORS.
F E Huelin
J Sci Food A 15(4):227-236
Apr 1964 3B2 SO12
Scald (apples), Storage.

839-67
SCOPOLIN PRODUCTION IN POTATO TUBERS INFECTED WITH PHYTOPHTHORA INFESTANS.
J C Hughes T Swain
Phytopatholo 50(5):398-400
May 1960 464.B P56
Phytophthora infestans, Potatoes, Scopolin.

840-67
WILD SOURCES OF BLUEBERRY STUNT VIRUS IN NEW JERSEY.
M T Hutchinson A C Goheen E H Varney
Phytopatholo 50(4):30B-312, BIB. 311-312
Apr 1960 464.8 P56
Blueberries, New Jersey, Stunt (blueberries).

841-67
TYPES OF INJURIES ON CANTALOUPE LEAVES ASSOCIATED WITH GUTTATION.
S S Ivanoff
Phytopatholo 50(9):640
Sep 1960 464.8 P56
Cantaloupes, Guttation, Plant injuries.

842-67
DIFFERENTIATION OF OAT HELMINTHOSPORIA BY THE RAGDOLL METHOD.
S S Ivanoff
Plant Dis R 44(7):53B-542
15 Jul 1960 1.9 P69P
Helminthosporia, Oats, Ragdoil method.

843-67
CERCOSPORA BLIGHT OF SNAPDRAGON.
C R Jackson
Phytopatholo 50(3):190-I92
Mar 1960 464.8 P56
Antirrhinum, Cercospora antirrhini.

844-67
THE INFLUENCE OF STICKERS ON THE EFFECTIVENESS OF SPRAYS OF BACILLUS THURINGIENSIS VAR. THURINGIENSIS BERLINER AND BACILLUS ENTOMOCIDUS VAR. ENTOMOCIDUS HEIMPEL AND ANGUS.
R P Jaques C J S Fox
J Invertebrate Path 2(1):17-23
421 J826
Bacillus entomocidus var. entomocidus Heimpel and Angus, Bacllus thuringiensis var. thuringiensis Berliner, Spraying, Stickers.

845-67
PHYTOPHTHORA ROOT AND STEM ROT OF LUPINES.
J P Jones H W Johnson
Phytopatholo 50(9):641
Sep 1960 464.B P56
Lupine, Phytophthora, Root rot (lupines), Stem rot (lupines).

20 846-67

846-67
CHARACTERISTICS OF PLANT-VIRUS INHIBITORS IN RICE, ORYZA SATIVA.
R P Kahn T C Allen W J Zanmeyer
Phytopatholo 50(11):847-851
Nov 1960 464.8 P56
Oryza sativa L., Rice, Virus diseases (plants).

847-67
EXPERIMENTAL CONTROL OF PHONY PEACH VIRUS VECTORS WITH DI-SYSTON.
G H Kaloostian H N Pollard
J Econ Entom 55(4):566-567
Aug 1962 421 J822
Disulfoton, Insect vectors, Phony disease (peaches), Viruses.

848-67
TRANSMISSIBLE CORKY PIT OF FLEMISH BEAUTY PEAR.
F W L Keane M F Welsh
Plant Dis R 44(8):636-638
15 Aug 1960 1.9 P69P
Corky pit (pears), Pears, Plant disease transmission.

849-67
PEACH SHOT HOLE IN ARIZONA.
P D Keener
Plant Dis R 44(8):629, PL.
15 Aug 1960 1.9 P69P
Arizona, Peaches, Shot-hole (peaches).

850-67
NEEDLE BLIGHT OF REDCEDAR, JUNIPERUS VIRGINIANA L.
A Keiman C S Hodges H R Garriss
Plant Dis R 44(7):527-531
15 Jul 1960 1.9 P69P
Juniperus, Juniperus virginiana,
Needle blight (juniperus virginiana).

851-67
A SOLOPATHOGENIC LINE OF TILLETIA CARIES.
E L Kendrick
Phytopatholo 50(9):641
Sep 1960 464.8 P56
Solopathogenicity, Tilletia caries.

852-67
COMPATIBILITY RELATIONSHIPS BETWEEN MONOSPORIDIAL ISOLATES OF TILLETIA CARIES AND T. CONTRAVERSA.
E L Kendrick C S Holton
Phytopatholo 50(9):641
Sep 1960 464.8 P56
Tilletia caries, Tilletia contraversa.

853-67
ANGULAR LEAFSPOT, A NEW DISEASE OF STRAWBERRY.
B W Kennedy T H King
Phytopatholo 50(9):641-642
Sep 1960 464.8 P56
Angular leafspot (strawberries), Strawberries.

854-67
PRODUCTION OF HEAT DURING FERMENTATION OF CACAO BEANS.
R H Kenten B D Powell
J Sci Food A 11(7):396-400
Jul 1960 382 S012
Cacao, Cacao beans, Fermentation, Heat.

855-67
HEAT-INDUCED STOLON ROT OF LADINO WHITE CLOVER IN THE GREENHOUSE.
R A Kilpatrick
Plant Dis R 44(8):653-654
15 Aug 1960 1.9 P69P
Greenhouse heating, Ladino clover,
Stolon rot (ladino clover), White clover.

856-67
RESISTANCE TO PHYTOPHTHORA ROOT ROT IN PEPPER.
K A Kimble R G Grogan
Phytopatholo 50(9):642
Sep 1960 464.8 P56
Bush redpeppers (vegetable), Phytophthora capsici,
Plant disease resistance, Root rot (pepper).

857-67
VARIATION IN MAIZE SEEDLING BLIGHT SYMPTOMS WITH CHANGES IN PATHOGEN SPECIES, ISOLATE AND HOST GENOTYPE.
G C Kingsland C C Wernham
Plant Dis R 44(7):496-497
15 Jul 1960 1.9 P69P
Blight (corn), Corn, Corn, Genotypes, Host plants, Isolates, Microorganisms, Seedlings.

858-67
VARIATION IN PATHOGENICITY IN RHYNCHOSPORIUM SECALIS.
D M Kline
Phytopatholo 50(9):642
Sep 1960 464.8 P56
Pathogenicity, Rhynchosporium secalis.

859-67
STUDIES ON CONTROL OF BLACK ROT OF CRUCIFERS WITH ANTIBIOTICS.
J M Klislewicz G S Pound
Phytopatholo 50(9):642
Sep 1960 464.8 P56
Antibiotics, Black rot (cruciferae), Cruciferae,
Xanthomonas campestris.

860-67
THE PRODUCTION AND USE OF ZOOSPORE SUSPENSIONS OF PHYTOPHTHORA SPP. FOR INVESTIGATIONS OF DISEASES OF CITRUS.
L J Klotz T A DeWolfe
Plant Dis R 44(7):572-573
15 Jul 1960 1.9 P69P
Citrus, Phytophthora spp., Zoospores.

861-67
DETERIORATION OF IMMATURE JACK AND RED PINE PLANTATIONS IN WISCONSIN.
R G Krebill R F Patton
Phytopatholo 50(9):642-643
Sep 1960 464.8 P56
Pinus banksiana, Pinus banksiana, Pinus resinosa,
Pinus resinosa, Plantations, Wisconsin.

862-67
SPECIFIC INFECTIVITY CHANGES WITH ALFALFA MOSAIC VIRUS.
C W Kuhn J B Bancroft
Phytopatholo 50(9):643
Sep 1960 464.8 P56
Alfalfa, Mosaic (alfalfa).

863-67
THE CRIBRATE WEEVIL, A NEW PEST OF THE GLOBE ARTICHOKE IN CALIFORNIA.
W H Lange N F McCalley
J Econ Entom 55(1):14-17, PL.
Feb 1962 421 J822
Artichokes, Artichokes, Cribrate weevil, Insecticides,
Pest control.

864-67
SELECTIVE PROTECTION AFFORDED BY CERTAIN SEED AND SOIL FUNGICIDES.
L D Leach R H Garber W J Tolmsoff
Phytopatholo 50(9):643-644
Sep 1960 464.8 P56
Fungicides, Seed treatment, Soil fumigation.

865-67
TRANSMISSION OF A DISEASE OF HELMINTHOSPORIUM VICTORIAE.
G D Lindberg
Phytopatholo 50(9):644
Sep 1960 464.8 P56
Helminthosporium victoriae, Plant disease transmission.

866-67
FURTHER CYTOLOGICAL AND CYTOCHEMICAL STUDIES ON THE INSECT VECTOR OF ASTER YELLOWS VIRUS.
V C Littau K Maramorosch
Phytopatholo 50(4):240
Apr 1960 464.8 P56
Aster yellows (callistephus chinensis),
Aster yellows (carrots), Insect cytology, Insect vectors,
Macrosteles fascifrons.

867-67
IDENTIFYING TWO SWEET POTATO VIRUSES WITH PAPER CHROMATOGRAPHY.
G Loebenstein
Phytopatholo 50(2):98-99
Feb 1960 464.8 P56
Chromatography, Sweetpotatoes, Viruses.

868-67
VIRUS DISEASES OF SWEET POTATOES IN ISRAEL.
G Loebenstein I Harpaz
Phytopatholo 50(2):100-104

Feb 1960 464.8 PS6
Sweetpotatoes, Virus diseases (plants).

869-67
LEAF ENATIONS IN APPLE INOCULATED FROM CHERRY.
T B Lott F W L Keane
Plant Dis R 44(8):634-635, PL.
15 Aug 1960 1.9 P69P
Apples, Cherries, Immunization, Leaf enation (cherries), Rasp leaf (cherries).

870-67
THE VIRUS CONTENT OF FLOWERING CHERRIES AT SUMMERLAND, 8RITISH COLUM8IA.
T B Lott F W L Keane
Plant Dis R 44(8):632-633
1S Aug 1960 1.9 P69P
8ritish Columbia, Cherries.

871-67
VIRUS INFECTION NOT THE CAUSE OF EARLINESS IN THREE STRAINS OF ITALIAN PRUNE.
T B Lott A J Mann F W L Keane
Plant Dis R 44(8):633
1S Aug 1960 1.9 P69P
Earliness (prunes), Prunes.

872-67
HOSTS FOR DIFFERENTIATING OAT LOOSE-SMUT RACES OF THE SOUTHEASTERN UNITED STATES.
H H Luke D D Morey S J Hadden
Phytopatholo S0(3):209-212
Mar 1960 464.8 PS6
Loose smut (oats), Oats.

873-67
INHERITANCE AND LINKAGE STUDIES OF A DERIVED VICTORIA-TYPE CROWN RUST RESISTANCE AND VICTORIA 8LIGHT.
H H Luke P L Pfahler
Phytopatholo S0(9):644
Sep 1960 464.8 PS6
Crown rust (oats), Inheritance, Oats, Victoria blight (oats).

874-67
VICTORIA-TYPE RESISTANCE TO CROWN RUST SEPARATED FROM SUSCEPTIBILITY TO HELMINTHOSPORIUM 8LIGHT IN OATS.
H H Luke H E Wheeler A T Wallace
Phytopatholo 50(3):205-209
Mar 1960 464.8 PS6
Crown rust (oats), Helminthosporium blight, Oats, Victoria blight (oats).

875-67
CONIDIAL PRODUCTION FROM FILTER PAPER CULTURES OF HELMINTHOSPORIUM VAGANS AND ALTERNARIA SOLANI.
R J Lukens
Phytopatholo 50(11):867-868
Nov 1960 464.8 PS6
Alternaria solani, Culture media, Helminthosporium vagans.

876-67
OCCURRENCE OF CYTOSPORA CANKER IN STONE FRUIT TREES IN CALIFORNIA.
F L Lukezic J E DeVay H English
Phytopatholo 50(1):84-85
Jan 1960 464.8 PS6
California,[1] Canker (fruit), Cytospora, Frult, Trees.

877-67
LEAF SPOT OF PEANUT IN GEORGIA CAUSED 8Y LEPTOSPHAERULINA ARCHIDICOLA.
E S Luttrell L W Boyle
Plant Dis R 44(8):609-611
15 Aug 1960 1.9 P69P
Georgia, Leaf spot (peanuts), Leptosphaerulina archidicola, Peanuts.

878-67
CHANGES IN THE OXIDATION RATES OF POLYPHENOLS AND ASCORBIC ACID IN TOBACCO STEM TISSUES INVADED BY PSEUDOMONAS SOLANACEARUM.
E C Maine A Kelman
Phytopatholo 50(9):645
Sep 1960 464.8 PS6
Ascorbic acid, Phenols, Pseudomonas solanacearum, Tissues, Tobacco.

879-67
AN INCIDENCE ON LONG ISLAND, N.Y. OF MICRUTALIS CALVA, A CLOSE RELATIVE OF THE VECTOR OF PSEUDO-CURLYTOP VIRUS.
K Maramorosch
Phytopatholo S0(4):241
Aug 1960 464.8 P56
Micrutalis calva (Say) sensu lato, Pseudo-curlytop virus, Ruga verrucosans.

880-67
CONTROL OF INTERNAL CORK OF SWEET POTATO 8Y ISOLATION.
W J Martin E J Kantack
Phytopatholo 50(2):1S0-1S2
Feb 1960 464.8 PS6
Internal cork (sweetpotatoes), Plant disease control.

881-67
ANALYSIS FOR INTERNAL CORK VIRUS (ICV) IN SERIAL NODES OF SWEET POTATO STEMS.
W J Martin
Phytopatholo S0(9):64S
Sep 1960 464.8 P56
Internal cork (sweetpotatoes), Ipomoea tricolor, Sweetpotatoes.

882-67
ROOT AND SHOOT DEVELOPMENT OF WHEAT INFECTED WITH LOOSE SMUT, USTILAGO TRITICI.
S C Mather E D Hansing
Phytopatholo S0(9):64S
Sep 1960 464.8 PS6
Loose smut (wheat), Ustilago tritici, Wheat.

883-67
THE OCCURRENCE OF A VARIETY OF ENZYMES HYDROLYZING CELL WALL POLYSACCHARIDES IN APPLES ROTTED 8Y 80TRYOSPHAERIA RIBIS.
J H McClendon G F Somers J W Heuberger
Phytopatholo S0(4):2S8-261, BIBL. 261
Apr 1960 464.8 PS6
Apples, Botryosphaeria ribis Gross and Dug., Cell wall, Enzymes, Hydrolysis, Polysaccharides, White rot (apples).

884-67
8ARK PATCH GRAFTS AS A MEANS OF INDEXING FOR THE STEM-PITTING VIRUS.
R C McCrum
Phytopatholo S0(4):241
Apr 1960 464.8 P56
Stem pitting virus.

88S-67
RECENT OCCURENCE OF 8ACTERIAL 8LIGHT OF POINSETTIA IN FLORIDA.
L A McFadden D 8 Creager
Plant Dis R 44(7):568-571
1S Jul 1960 1.9 P69P
Bacterial blight (poinsettia), Euphorbia pulcherrima, Euphorbia pulcherrima, Florida.

886-67
TRANSMISSION OF LETTUCE MOSAIC VIRUS 8Y A NEW VECTOR, PEMPHIGUS BURSARIUS.
D L McLean
J Econ Entom S5(S):580-583, TA8S.
Oct 1962 421 J822
Insect vectors, Mosaic (lettuce), Pemphigus bursarius (L.), Plant disease transmission.

887-67
THE APOTHECIAL STAGE OF 80TRYTIS SQUAMOSA, CAUSE OF TIP AND LEAF 8LIGHT OF ONIONS.
D M McLean
Plant Dis R 44(7):585-S86
1S Jul 1960 1.9 P69P
Apothecium, Botrytis squamosa, Leaf blight (onions), Onions, Tip blight (onions).

888-67
THE ROLE OF THE OOSPORES OF PERONOSPORA PARASITICA IN DOWNY MILDEW OF CRUCIFERS.
D McMeekin
Phytopatholo S0(2):93-97
Feb 1960 464.8 PS6
Brassica oleraceae, Crucifers, Downy mildew (broccoli), Downy mildew (cabbage), Downy mildew (cauliflower), Oospores, Peronospora parasitica.

20 BB9-67

BB9-67
HOJA BLANCA TRANSMISSION STUDIES ON RICE.
W W McMillian J U McGuire H A Lamey
J Econ Entom SS(S):796-797
Oct 1962 421 J822
Hoja blanca (rice), Plant disease transmission, Rice, Viruses.

B90-67
FOUR PATHOGENIC STRAINS OF TMV ON TOMATO.
J J McRitchie
Phytopatholo S0(9):64S
Sep 1960 464.B PS6
Lycopersicon, Mosaic (tobacco), Tomatoes.

B9I-67
BANANA FRUIT-SPOT CAUSED BY DEIGHTONIELLA TORULOSA (SYD.) ELL.
D S Meredith
Plant Dis R 44(8):61B-621, PL.
15 Aug 1960 1.9 P69P
Bananas, Deightoniella torulosa (Syd.) Ell., Fruit spot (bananas).

B92-67
VARIABILITY IN STEM RUST REACTIONS OF KUBANKA WHEAT WITH LIGHT INTENSITY AND TEMPERATURE.
C W Miller H Hart
Phytopatholo S0(9):645-646
Sep 1960 464.8 P56
Kubanka wheat, Light, Stem rust (wheat), Temperature.

B93-67
SPY 227, A SENSITIVE INDICATOR FOR APPLE VIRUSES.
D F Millikan H W Guengerich
Phytopatholo S0(9):646
Sep 1960 464.8 P56
Apples, Spy 227.

894-67
THE ROLE OF FUMARIC ACID, A FUNGAL TOXIN, INVOLVED IN THE HULL ROT DISEASE OF ALMOND.
C J Mirocha E E Wilson J E DeVay
Phytopatholo 50(9):646
Sep 1960 464.8 PS6
Almonds, Fumaric acid, Hull rot (prunus amygdalus), Prunus amygdalus, Rhizopus, Toxins.

B95-67
A QUANTITATIVE METHOD FOR DETERMINING FUMARIC ACID, A TOXIN INVOLVED IN THE HULL ROT DISEASE OF ALMOND.
C J Mirocha J E DeVay E E Wilson
Phytopatholo S0(9):646
Sep 1960 464.8 PS6
Almonds, Fumaric acid, Hull rot (prunus amygdalus), Prunus amygdalus, Quantitative analysis, Toxins.

896-67
CACHEXIA AND XYLOPOROSIS-ARE THEY CAUSED BY THE SAME VIRUS.
S Moreira
Int Organ Citrus Virol Pr 3:56-60
1963 464.06 IN82
Cachexia (citrus), Xyloporosis (citrus).

897-67
TRISTEZA TOLERANT ROOTSTOCKS - THEIR BEHAVIOR AFTER TWELVE YEARS IN ORCHARD.
S Moreira T J Grant A A Salibe C Roessing
Int Organ Citrus Virol Pr 3:1B-24
1963 464.06 INB2
Rootstocks, Tristeza (citrus).

B9B-67
A QUICK METHOD OF PREPARING BARLEY EMBRYOS FOR LOOSE SMUT EXAMINATION.
D J Morton
Phytopatholo S0(4):270-272
Apr 1960 464.8 PS6
Barley, Plant embryos, Smut (barley).

899-67
A SEEDLING TEST FOR DETECTING VIABLE USTILAGO NUDA MYCELIUM FOLLOWING BARLEY SEED TREATMENTS.
D J Morton
Phytopatholo S0(9):647
Sep 1960 464.8 P56
Barley, Mycelia, Seed treatment, Seedlings, Ustilago nuda.

900-67
GENETICS OF THE ALLELIC SERIES AT THE MI)A LOCUS IN BARLEY AND CULTURES OF ERYSIPHE GRAMINIS F. SP. HORDEI THAT DIFFERENTIATE THESE ALLELES.
J G Moseman C W Schaller
Phytopatholo 50(10):736-740 BIBL. 740-741, TABS.
Oct 1960 464.B P56
Alleles, Erysiphe graminis f. sp. hordei, Pathogenesis, Plant genetics.

901-67
INHERITANCE OF S GENES CONDITIONING PATHOGENICITY IN ERYSIPHE GRAMINIS F. SP. HORDEI ON BARLEY.
J G Moseman
Phytopatholo 50(9):647
Sep 1960 464.8 PS6
Barley, Erysiphe graminis f. sp. hordei, Genes, Inheritance.

902-67
GENES CONDITIONING PATHOGENICITY IN ERYSIPHE GRAMINIS F. SP. HORDEI ON BARLEY VARIETY ATLAS 46.
J G Moseman
Phytopatholo S0(9):647
Sep 1960 464.8 PS6
Atlas 46, Barley, Erysiphe graminis f. sp. hordei, Genes, Powdery mildew (barley).

903-67
INCREASE IN THE INCIDENCE OF VERTICILLIUM WILT OF EGGPLANT IN THE PRESENCE OF PRATYLENCHUS PENETRANS.
W B Mountain C D McKeen
Phytopatholo 50(9):647
Sep 1960 464.B P56
Eggplant, Pratylenchus penetrans, Verticillium wilt (eggplant).

904-67
SYMPTOMS OF VERTICILLIUM WILT OF CASTOR BEAN.
K E Mueller B R Houston
Phytopatholo 50(1):BS
Jan 1960 464.8 PS6
Castor bean, Verticillium albo-atrum, Wilt.

905-67
TRANSMISSION OF BARLEY YELLOW DWARF VIRUS TO OATS BY APHIDS MADE VIRULIFEROUS BY NEEDLE INJECTION.
W C Mueller W F Rochow A F Ross
Phytopatholo 50(9):647
Sep 1960 464.8 PS6
Aphididae, Barley, Injections, Oats, Plant disease transmission, Yellow dwarf (barley).

906-67
EFFECT OF SOIL FUNGICIDES UPON SOIL-BORNE PLANT PATHOGENIC BACTERIA AND SOIL NITROGEN.
D E Munnecke J Ferguson
Plant Dis R 44(7):SS2-SSS
15 Jul 1960 1.9 P69P
Fungicides, Nitrogen, Pathogenic bacteria, Soil-borne plant diseases, Soils.

907-67
HAIRY ROOT OF FIELD ROSES.
D E Munnecke
Phytopatholo S0(9):647-64B
Sep 1960 464.8 PS6
Hairy root (rosa), Rosa.

908-67
DIAGNOSTIC AIDS IN DISTINGUISHING INTERNAL BROWNING AND GRAYWALL OF TOMATO.
H H Murakishi
Phytopatholo S0(9):64B
Sep 1960 464.B PS6
Graywall (tomatoes), Internal browning (tomatoes), Tomatoes.

909-67
TRANSMISSION OF PAPAYA MOSAIC VIRUS BY THE GREEN PEACH APHID.
R Namba C Y Kawanashi
J Econ Entom S9(3):669-671
Jun 1966 421 J822
Myzus persicae, Myzus persicae, Papaya mosaic virus.

910-67
STIMULATION OF BROOMRAPE SEED GERMINATION.
S M Nash S Wilhelm
Phytopatholo S0(10):772-774
Oct 1960 464.B P56
Gibberellic acid, Orobanche, Orobanche, Parasitism.

911-67
STEM ROT OF DRACAENA SANDERIANA.
R M Natour H N Miller
Phytopatholo 50(9):648
Sep 1960 464.8 P56
Aspergillus niger, Dracaena sanderiana,
Stem rot (dracaena sanderiana).

912-67
BACTERIAL SPOT OF TOMATO AS INFLUENCED BY TEMPERATURE AND BY AGE AND NUTRITION OF THE HOST.
M V Nayudu J C Walker
Phytopatholo 50(5):360-364
May 1960 464.8 P56
Bacterial spot (tomatoes), Plant nutrition,
Plant senescence, Plant temperature, Tomatoes.

913-67
PHYSIOLOGY OF BACTERIAL SPOT OF TOMATO.
M V Nayudu J C Walker
Phytopatholo 50(9):648
Sep 1960 464.8 P56
Bacterial spot (tomatoes), Plant physiology, Tomatoes.

914-67
NITROGEN SUPPLEMENT IN THE LOUISIANA-MISSISSIPPI RIVER DELTA AS A POSSIBLE CONTROL FOR VERTICILLIUM WILT OF COTTON.
D C Neal J B Sinclair
Plant Dis R 44(7):478
15 Jul 1960 1.9 P69P
Chemical control (plant diseases), Nitrogen, Verticillium,
Wilt (cotton).

915-67
THE EARLY LEAF AND TWIG BLIGHT STAGE OF SYCAMORE ANTHRACNOSE.
D Neely E B Himelick
Phytopatholo 50(9):648
Sep 1960 464.8 P56
Anthracnose (platanus), Gnomonia veneta,
Leaf blight (platanus), Platanus, Platanus,
Twig blight (platanus).

916-67
CONTROL OF VASCULAR WILT DISEASES OF CARNATION BY CULTURE-INDEXING.
P E Nelson J Tammen R Baker
Phytopatholo 50(5):356-360, BIBL. 359-360
May 1960 464.8 P56
Culture-indexing, Dianthus caryophyllus, Wilt (carnation).

917-67
COCHLIOBOLUS VICTORIAE, THE PERFECT STAGE OF HELMINTHOSPORIUM VICTORIAE.
R R Nelson
Phytopatholo 50(10):774-775
Oct 1960 464.8 P56
Fungus diseases (plants), Helminthosporium victoriae,
Rot (oats), Seedling blight.

918-67
EVOLUTION OF SEXUALITY AND PATHOGENICITY. I. INTERSPECIFIC CROSSES IN THE GENUS HELMINTHOSPORIUM.
R R Nelson
Phytopatholo 50(5):375-377
May 1960 464.8 P56
Helminthosporium spp., Pathogenesis, Sex.

919-67
THE GENETICS OF COMPATIBILITY IN COCHLIOBOLUS CARBONUM.
R R Nelson
Phytopatholo 50(2):158-160
Feb 1960 464.8 P56
Cochliobolus carbonum, Genetics.

920-67
THE INHERITANCE OF PATHOGENICITY AND MATING TYPE IN CROSSES OF HELMINTHOSPORIUM CARBONUM AND HELMINTHOSPORIUM VICTORIAE.
R R Nelson T T Hebert
Phytopatholo 50(9):649
Sep 1960 464.8 P56
Helminthosporium carbonum, Helminthosporium victoriae.

921-67
RUST FUNGI ON NATIVE AND CULTIVATED RHODODENDRONS IN CALIFORNIA.
C W Nichols D J Bingham W M Brown Jr D Y Rosenberg
Phytopatholo 50(9):649
Sep 1960 464.8 P56
California, Chrysomyxa ledi var. rhododendri, Rhododendrons,
Rust (rhododendrons), Uredinales.

922-67
HEAT INACTIVATION OF STONE FRUIT RINGSPOT VIRUS.
G Nyland
Phytopatholo 50(5):380-382
May 1960 464.8 P56
Heat, Ring spot (fruit).

923-67
JUICE TRANSMISSION OF CUCUMBER MOSAIC VIRUS TO MAZZARD AND MAHALEB CHERRY.
G Nyland
Phytopatholo 50(1):85
Jan 1960 464.8 P56
Mazzard cherries, Mosaic (cucumbers), Prunus mahaleb.

924-67
EFFECTS OF THE COMBINATION OF SODIUM PENTACHLOROPHENOXIDE AND LIQUID LIME-SULFUR ON THE BROWN-ROT FUNGI.
J M Ogawa E E Wilson
Phytopatholo 50(9):649
Sep 1960 464.8 P56
Brown rot, Lime-sulfur, Sodium pentachlorophenoxide.

925-67
EVIDENCE THAT XYLOPOROSIS VIRUS DOES NOT PASS THROUGH SEEDS OF PALESTINE SWEET LIME.
E O Olson
Int Organ Citrus Virol Pr 3:86-89
1963 464.06 IN82
Citrus, Palestine sweet lime, Seed analysis, Seeds,
Xyloporosis (citrus).

926-67
DOES THE CABBAGE APHID CARRY CABBAGE VIRUS B BOTH ON ITS MOUTHPARTS AND AT SOME OTHER SITE.
G B Orlob R H E Bradley
Phytopatholo 50(9):649
Sep 1960 464.8 P56
Brevicoryne brassicae, Cabbage.

927-67
KANSAS AEROMYCOLOGY, VII. SMUTS.
S M Pady C L Kramer
Phytopatholo 50(5):332-334, BIBL. 333-334
May 1960 464.8 P56
Kansas, Mycology, Ustilaginales.

928-67
NATURE OF RESISTANCE TO DIPLODIA STALK ROT OF CORN.
A J Pappelis F G Smith
Phytopatholo 50(9):650
Sep 1960 464.8 P56
Corn, Diplodia zeae, Stalk rot (corn).

929-67
HOST SPECIALIZATION OF DWARF MISTLETOE ON RED AND WHITE FIR IN CALIFORNIA.
J R Parmeter Jr R F Scharpf J R Hood
Phytopatholo 50(9):650
Sep 1960 464.8 P56
Abies concolor, Abies magnifica, Arceuthobium campylopodum,
California, Host indexing (plants).

930-67
ABSENCE OF YOUNG-LEAF SYMPTOMS OF PSOROSIS IN THE STATE OF BAHIA, BRAZIL.
O S Passos
Int Organ Citrus Virol Pr 3:167-169
1963 464.06 IN82
Brazil, Leaves, Psorosis.

931-67
A ROOT DISEASE OF FUCHSIA CAUSED BY PHYTOPHTHORA PARASITICA.
S S Patil R A Young
Phytopatholo 50(1):85-86
Jan 1960 464.8 P56
Fuchsia, Phytophthora parasitica, Root disease.

932-67
THE INFLUENCE OF TEMPERATURE ON DEVELOPMENT OF PHYTOPHTHORA PARASITICA ROOT ROT OF FUCHSIA.
S S Patil R A Young
Phytopatholo 50(5):386-388
May 1960 464.8 P56
Fuchsia, Phytophthora parasitica, Plant temperature,
Root rot (fuchsia).

20 933-67

933-67
NATURAL OCCURRENCE OF POTATO VIRUS X IN FIELD-GROWN PEPPERS IN CALIFORNIA.
A O Paulus J B Kendrick Jr P R Desjardins
Phytopatholo 50(9):650
Sep 1960 464.8 P56
Bush redpeppers (vegetable), California.

934-67
CURLY TOP PREVENTION BY VECTOR CONTROL ON SNAP BEANS GROWN FOR SEED.
W E Peay W N Oliver
J Econ Entom 57(1):3-5, BIBL., TABS.
Feb 1964 421 JB22
Beans, Chemical control (plant diseases), Curly top (beets), Insect vectors.

935-67
RELATIONS BETWEEN INOCULUM DENSITY AND INFECTION OF WHEAT BY UREDOSPORES OF PUCCINIA GRAMINIS VAR. TRITICI.
L J Petersen
Phytopatholo 50(1):86
Jan 1960 464.8 P56
Puccinia graminis var. tritici, Wheat.

936-67
PURIFICATION AND PROPERTIES OF CAULIFLOWER MOSAIC VIRUS.
T P Pirone G S Pound
Phytopatholo 50(9):651
Sep 1960 464.8 P56
Cauliflower, Mosaic (cauliflower).

937-67
BIOCHEMICAL STUDIES OF THE CLOVER ROOT TUMORS INDUCED BY WOUND-TUMOR VIRUS.
C A Porter L H Weinstein
Phytopatholo 50(9):651
Sep 1960 464.8 P56
Clover, Plant biochemistry, Plant galls, Wound-tumor (clover), Yellow sweetclover.

938-67
TRANSMISSION OF PSOROSIS VIRUS BY DODDER.
W C Price
Int Organ Citrus Virol Pr 3:162-166
1963 464.06 INB2
Cuscuta, Plant disease transmission, Psorosis.

939-67
EXOCORTIS AND OTHER PROBLEMS WITH TRIFOLIATE ORANGE ROOTSTOCK.
A R Pujol
Int Organ Citrus Virol Pr 3:128-133
1963 464.06 INB2
Exocortis (citrus), Rootstock, Trifoliate oranges.

940-67
STUDY OF PSOROSIS IN CONCORDIA, ARGENTINA.
A R Pujol H N Benatena
Int Organ Citrus Virol Pr 3:170-174
1963 464.06 IN82
Argentina, Psorosis.

941-67
WHEAT BUNT DEVELOPMENT IN RELATION TO POSTINFECTION ENVIRONMENT.
L H Purdy
Phytopatholo 50(9):651
Sep 1960 464.8 P56
Environment, Stinking smut (wheat), Tilletia caries, Wheat.

942-67
FUSARIUM WILT OF SEDUM.
R D Raabe
Phytopatholo 50(9):651
Sep 1960 464.8 P56
Fusarium oxysporum, Sedum amecamecanum, Wilt (Sedum).

943-67
SOIL INDEXING FOR PEA ROOT ROT AND THE EFFECT OF ROOT ROT ON YIELD.
T P Rolling T H King R W Fields
Phytopatholo 50(4):287-290
Apr 1960 464.8 P56
Crop yields, Root rot (peas), Soil indexing.

944-67
A METHOD OF EVALUATING FUNGICIDES IN THE SOIL UNDER CONTROLLED CONDITIONS.
J H Reinhart
Plant Dis R 44(8):648-652
15 Aug 1960 1.9 P69P
Chemicals, Fungicide evaluation, Fungicides, Soil fungi, Soils.

945-67
SURVIVAL OF PHYSIOLOGIC RACES OF PUCCINIA GRAMINIS VAR. TRITICI ON WHEAT NEAR BARBERRY BUSHES.
C W Roane E C Stakman W Q Loegering D M Stewart W M Watson
Phytopatholo 50(1):40-44
Jan 1960 464.8 P56
Barberry bush, Puccinia graminis var. tritici, Wheat.

946-67
ADAPTATION OF THE CORN LEAF BLIGHT FUNGUS TO A RESISTANT AND A SUSCEPTIBLE CORN HOST.
A L Robert G F Sprague
Phytopatholo 50(4):261-263
Apr 1960 464.8 P56
Corn, Leaf blight (corn), Plant disease resistance, Plant hosts, Trichometasphaeria turcica.

947-67
PHYSIOLOGIC SPECIALIZATION IN HELMINTHOSPORIUM TURCICUM.
A L Robert
Phytopatholo 50(3):217-220
Mar 1960 464.8 P56
Corn, Helminthosporium turcicum, Pathogenicity.

948-67
THE ROLE OF ALTERNATE PLANT HOSTS IN THE APHID TRANSMISSION OF BEAN MOSAICS IN CENTRAL WASHINGTON.
R S Robertson Jr E C Klostermeyer
J Econ Entom 55(4):460-462
Aug 1962 421 JB22
Aphididae, Epidemiology, Mosaic (beans), Plant hosts.

949-67
VIRUSES IN SWEET LIME ROOTSTOCK IN BELLA VISTA, CORRIENTES.
D Rodriguez
Int Organ Citrus Virol Pr 3:99-101
1963 464.06 INB2
Bella vista, Rootstock, Sweet lime, Virus diseases (plants).

950-67
STEM PITTING PROBLEM IN A PERA SWEET ORANGE FERTILIZATION EXPERIMENT.
O Rodriguez S Moreira
Int Organ Citrus Virol Pr 3:49-51
1963 464.06 INB2
Fertilization (plants), Pera orange, Stem pitting (citrus), Tristeza (citrus).

951-67
STUDIES ON THE PENETRATION AND NUTRITION OF STRIGA ASIATICA.
W E Rogers R R Nelson
Phytopatholo 50(9):652
Sep 1960 464.8 P56
Plant nutrition, Striga asiatica.

952-67
CROSS-PROTECTION STUDIES WITH STRAINS OF CONCAVE GUM AND PSOROSIS VIRUSES.
C N Rolstacher E C Calavan
Int Organ Citrus Virol Pr 3:154-161
1963 464.06 INB2
Concave gum (oranges), Plant protection, Psorosis.

953-67
RESISTANCE INDUCED IN ONE PLANT PART AS A RESULT OF VIRUS INFECTION IN ANOTHER PART.
A F Ross R F Bozarth
Phytopatholo 50(9):652
Sep 1960 464.8 P56
Plant disease resistance.

954-67
INCIDENCE OF DIFFERENT TYPES OF PSOROSIS IN CITRUS VARIETIES IN THE STATE OF SAO PAULO.
V Rossetti A A Salibe
Int Organ Citrus Virol Pr 3:150-153
1963 464.06 INB2
Citrus, Psorosis, Sao Paulo, Virus incidence.

955-67
THE SUSCEPTIBILITY OF TWENTY-THREE TREE SPECIES TO BLACK ROOT ROT.
S J Rowan

Plant Dis R 44(8):646-647
15 Aug 1960 1.9 P69P
Black root rot (pinus), Pinus, Pinus,
Tree disease resistance.

956-67
SUSCEPTIBILITY OF TWENTY-THREE TREE SPECIES TO BLACK ROOT ROT.
S J Rowan
Phytopatholo 50(9):653
Sep 1960 464.8 P56
Black root rot.

957-67
ON THE IMPIETRATURA OF GRAPEFRUIT.
G Ruggieri
Int Organ Citrus Virol Pr 3:179-181
1963 464.06 IN82
Grapefruit, Impletratura.

958-67
INHERITANCE OF STEM RUST RESISTANCE OF C.I.7232, A DERIVED TETRAPLOID OAT.
K Sadanaga H C Murphy R Grindeland
Phytopatholo 50(11):779-781
Nov 1960 464.8 P56
Oats, Plant genetics, Stem rust (oats).

959-67
TRANSMISSION OF BARLEY YELLOW-DWARF VIRUS BY FOUR BIOTYPES OF THE CORN LEAF APHID, RHOPALOSIPHUM MAIDIS.
K N Saksena S R Singh W H Sill Jr
J Econ Entom 57(4):569-571, TABS.
Aug 1964 421 J822
Insect vectors, Rhopalosiphum maidis (Fitch),
Yellow dwarf (barley).

960-67
STEM PITTING AND DECLINE OF PERA SWEET ORANGES IN THE STATE OF SAO PAULO.
A A Salibe V Rossetti
Int Organ Citrus Virol Pr 3:52-55
1963 464.06 IN82
Pera orange, Sao paulo, Stem pitting (citrus),
Tristeza (citrus).

961-67
STUDIES ON BUD-UNION CREASE OF CITRUS TREES.
A A Salibe
Int Organ Citrus Virol Pr 3:187-191
1963 464.06 IN82
Bud-union crease, Citrus.

962-67
SUSCEPTIBILITY OF CITRUS VARIETIES TO LEAF-CURL VIRUS.
A A Salibe
Int Organ Citrus Virol Pr 3:175-178
1963 464.06 IN82
Citrus, Leaf curl (citrus).

963-67
OCCURRENCE OF STEM PITTING IN CITRUS TYPES IN BRAZIL.
A A Salibe
Int Organ Citrus Virol Pr 3:40-45
464.06 IN82
Brazil, Citrus, Stem pitting (citrus).

964-67
NEW TEST VARIETIES FOR EXOCORTIS VIRUS.
A A Salibe S Moreira
Int Organ Citrus Virol Pr 3:119-123
1963 464.06 IN82
Exocortis (citrus), Tree diseases, Virus incidence.

965-67
STRAINS OF EXOCORTIS VIRUS.
A A Salibe S Moreira
Int Organ Citrus Virol Pr 3:108-112
1963 464.06 IN82
Exocortis (citrus).

966-67
SEED TRANSMISSION OF EXOCORTIS VIRUS.
A A Salibe S Moreira
Int Organ Citrus Virol Pr 3:139-142
1963 464.06 IN82
Exocortis (citrus), Plant disease transmission,
Seed-borne plant diseases.

967-67
TAHITI LIME BARK DISEASE IS CAUSED BY EXOCORTIS VIRUS.
A A Salibe S Moreira
Int Organ Citrus Virol Pr 3:143-147
1963 464.06 IN82
Bark disease, Exocortis (citrus), Limes.

968-67
REACTION OF TYPES OF CITRUS AS SCION AND AS ROOTSTOCK TO XYLOPOROSIS VIRUS.
A A Salibe S Moreira
Int Organ Citrus Virol Pr 3:70-75
1963 464.06 IN82
Citrus, Rootstock, Scion, Xyloporosis (citrus).

969-67
A SURVEY OF THE WORLD BARLEY COLLECTION FOR RESISTANCE TO BARLEY YELLOW DWARF.
C W Schaller
Phytopatholo 50(9):653
Sep 1960 464.8 P56
Barley, Plant disease resistance, Yellow dwarf (barley).

970-67
GERMINATION OF OOSPORES OF APHANOMYCES EUTEICHES EMBEDDED IN PLANT DEBRIS.
A L Scharen
Phytopatholo 50(4):274-277
Apr 1960 464.8 P56
Aphanomyces eutelches, Oospores, Plant decay,
Seed germination, Soil-borne plant diseases.

971-67
VARIATIONS IN RESPIRATORY RESPONSES IN FUSARIUM-INFECTED TOMATO PLANTS.
R P Scheffer
Phytopatholo 50(3):192-195
Mar 1960 464.8 P56
Fusarium, Plant respiration, Tomatoes.

972-67
EFFECTS OF POSTINOCULATION TEMPERATURES ON RATE OF BEAN RUST SYMPTOM DEVELOPMENT.
R D Scheln
Phytopatholo 50(9):653
Sep 1960 464.8 P56
Rust (beans), Temperature.

973-67
A HIGH-TEMPERATURE-INDUCED LOCAL NECROSIS ASSOCIATED WITH THE BEAN RUST DISEASE.
R D Scheln
Phytopatholo 50(9):653
Sep 1960 464.8 P56
Beans, Necrosis, Rust (beans), Temperature.

974-67
WATERMELON DISEASE INCIDENCE IN CENTRAL FLORIDA, 1931-1959.
N C Schenck
Plant Dis R 44(7):556-558
15 Jul 1960 1.9 P69P
Florida, Leaf diseases, Vascular diseases, Watermelons,
Weather.

975-67
EFFECTS OF TEMPERATURE AND MOISTURE STRESS ON THE LETTUCE POWDERY MILDEW FUNGUS.
W C Schnathorst
Phytopatholo 50(4):304-308
Apr 1960 464.8 P56
Humidity, Lettuce, Powdery mildew (lettuce), Temperature.

976-67
SEVERITY, PREVALENCE, AND ECOLOGY OF COTTON BOLL ROTS AS RELATED TO TEMPERATURE.
W C Schnathorst P M Halisky
Phytopatholo 50(9):653-654
Sep 1960 464.8 P56
Boll rot (cotton), Cotton, Temperature.

977-67
TEMPERATURE EFFECTING A REVERSAL OF DOMINANCE IN THE RESISTANCE OF PISUM SATIVUM TO BEAN VIRUS 2.
W T Schroeder R Provvidenti D W Barton W Mishanec
Phytopatholo 50(9):654
Sep 1960 464.8 P56
Dominance, Pisum sativum, Plant disease resistance,
Temperature, Virus 2 (beans).

20 978-67

978-67
AN UNUSUAL VIRUS ISOLATED FROM PISUM SATIVUM AFFECTED BY STREAK.
W T Schroeder R Provvidenti F L McEwen
Phytopathoio 50(9):654
Sep 1960 464.8 P56
Peas, Pisum sativum, Streak (peas).

979-67
ONION BLAST OR LEAF SPOTTING CAUSED BY SPECIES OF BOTRYTIS.
R H Segaii A G Newhaii
Phytopathoio 50(1):76-82
Jan 1960 464.8 P56
Biast (onion), Botrytis, Leaf spot (onion).

980-67
OCCURRENCE OF PSEUDOMONAS SOLANACEARUM IN VIRGIN SOILS IN COSTA RICA.
L Sequeira C W Averre III
Phytopathoio 50(9):654
Sep 1960 464.8 P56
Bacteriai wiit, Costa Rica, Pseudomonas soianacearum, Soii microorganisms.

981-67
USE OF BENZIMIDAZOLE AND EXCISED WHEAT SEEDLING LEAVES IN TESTING RESISTANCE TO SEPTORIA TRITICI.
W D Sewell R M Caldwell
Phytopathoio 50(9):654
Sep 1960 464.8 P56
Benzimidazoie, Piant disease resistance, Seedlings, Septoria tritici, Wheat.

982-67
SOURCES OF CROWN RUST RESISTANCE OF OATS.
H L Shands
Phytopathoio 50(9):654
Sep 1960 464.8 P56
Crown rust (oats), Oats, Piant disease resistance.

983-67
ENTOMOPHTHORACEOUS FUNGI ATTACKING THE POTATO APHID IN NORTHEASTERN MAINE IN 1960.
W A Shands I M Hall G W Simpson
J Econ Entom 55(2):174-179, TABS.
Apr 1962 421 J822
Entomophthoraceous fungi, Macrosiphum euphorbiae, Macrosiphum euphorbiae, Piant diseases.

984-67
INFLUENCE OF BORON NUTRITION OF NICOTIANA TABACUM ON THE MULTIPLICATION OF TOBACCO MOSAIC VIRUS.
R J Shepherd G S Pound
Phytopathoio 50(1):26-29
Jan 1960 464.8 P56
Boron compounds, Mosaic (tobacco), Piant nutrition, Tobacco.

985-67
MUTUAL EXCLUSION OF STRAINS OF TOBACCO MOSAIC VIRUS.
A Siegei
Phytopathoio 50(1):86
Jan 1960 464.8 P56
Mosaic (tobacco).

986-67
ON THE INFECTIVITY DILUTION CURVE OF PLANT VIRUSES.
A Siegei
Phytopathoio 50(1):89-90
Jan 1960 464.8 P56
Infectivity dilution curve, Virus diseases (piants).

987-67
ADDITIONAL CHARACTERISTICS OF PANICUM MOSAIC VIRUS.
W H Sill Jr M K Desai
Piant Dis R 44(7):487
15 Jul 1960 1.9 P69P
Mosaic (switchgrass), Panicum.

988-67
ADDITIONAL EVIDENCE THAT SWEETPOTATO MOSAIC VIRUS IS A STRAIN OF TOBACCO MOSAIC VIRUS.
W H Sill Jr S B Lal M S E del Rosario
Phytopathoio 50(10):709-711
Oct 1960 464.8 P56
Mosaic (sweetpotatoes), Mosaic (tobacco), Tobacco, Virus diseases (piants).

990-67
THE DEVELOPMENT OF STEM RUST ON WHEAT LEAVES TREATED WITH SOME SUGARS AND SUGAR ALCOHOLS.
W Silverman
Phytopathoio 50(2):114-119
Feb 1960 464.8 P56
Aicohois, Stem rust (wheat), Sugars.

991-67
A TOXIN EXTRACTED FROM MARQUIS WHEAT INFECTED BY RACE 38 OF THE STEM RUST FUNGUS.
W Silverman
Phytopathoio 50(2):130-136
Feb 1960 464.8 P56
Marquis wheat, Puccinia graminis var. tritici, Race 38, Stem rust (wheat).

992-67
THE PSEUDO-CURLY TOP DISEASE IN SOUTH FLORIDA.
J N Simons
J Econ Entom 55(3):358-363, TABS., PL.
Jun 1962 421 J822
Ambrosia, Datura stramonium, Membracidae, Nightshade, Pseudo-curly top disease, Stellaria media, Tobacco, Tomatoes, Viruses.

993-67
EFFECT OF CULTURE SUBSTRATE ON THE VIRULENCE OF SINGLE-BASIDIOSPORE ISOLATES OF PELLICULARIA FILAMENTOSA.
A C Sims Jr
Phytopathoio 50(4):282-286
Apr 1960 464.8 P56
Basidiospores, Cultural control (piant diseases), Isolates, Pelliicularia filamentosa (Pat), Virulence.

994-67
PHYSALOSPORA OBTUSA (CKE.) WINTER ON SOUTH CAROLINA LIVE OAKS.
W R Sitterly
Piant Dis R 44(7):533
15 Jul 1960 1.9 P69P
Physaiospora obtusa (Cke.) Winter, Quercus, Quercus.

995-67
A VIRUS OF WIDE HOST RANGE SEED-BORNE IN PHASEOLUS VULGARIS.
C B Skotland D W Burke
Phytopathoio 50(9):655
Sep 1960 464.8 P56
Host indexing (piants), Kidney beans, Seed-borne piant diseases, Viruses.

996-67
A VIRUS DISEASE OF HOPS, HUMULUS LUPULUS, IN WASHINGTON.
C B Skotland
Phytopathoio 50(9):655
Sep 1960 464.8 P56
Hops, Virus diseases (piants), Washington.

997-67
POPULATION STUDIES OF PSEUDOMONAS TABACI IN DIPLOID. TRIPLOID, AND TETRAPLOID NICOTIANA TABACUM PLANTS WITH DIFFERENT DOSES OF THE NICOTIANA LONGIFLORA GENE FOR RESISTANCE.
J H Smiley G W Stokes
Phytopathoio 50(9):655
Sep 1960 464.8 P56
Nicotiana longifiora gene, Piant disease resistance, Poiyploidy, Population, Pseudomonas tabaci, Tobacco.

998-67
OCCURRENCE OF VERTICILLIUM WILT ON PEANUTS.
T E Smith
Piant Dis R 44(6):435
15 Jun 1960 1.9 P69P
Immunization, Soil moisture, Verticiiiium, Wiit (peanuts).

999-67
TRUNK AND BRANCH CANKER OF COFFEE TREES IN GUATEMALA.
W C Snyder E E Trujillo K C McOnie C A Berger
Piant Dis R 44(7):566-567
15 Jul 1960 1.9 P69P
Branches, Canker (coffee), Coffee, Trunks.

1000-67
CHANGES IN POTATO PROTEINS INDUCED BY FUNGUS INFECTIONS.
M A Stahmann I Uritani K Tomiyama
Phytopathoio 50(9):P655
Sep 1960 464.8 P56
Fungi, Potatoes, Proteins.

1001-67
ALTERATION OF THE INCIDENCE OF BOTRYTIS CINEREA ON TOMATO BY LIMING THE SOIL.
R E Stall
Phytopatholo 50(9):655-656
Sep 1960 464.8 P56
Botrytis cinerea, Liming, Soils, Tomatoes.

1002-67
PROTEIN SYNTHESIS BY NONGERMINATED FUNGAL SPORES INCLUDING UREDOSPORES OF THE BEAN RUST FUNGUS.
R C Staples H P Burchfield
Phytopatholo 50(9):656
Sep 1960 464.B P56
Fungi, Protein synthesis, Rust (beans), Spores, Uredospores.

1003-67
SILVER TOP OF BLUEGRASS.
K J Starks R Thurston
J Econ Entom 55(6):865-867
Dec 1962 421 JB22
Poa, Silver top.

1004-67
MORPHOLOGICAL DIFFERENTIATION OF SPHERICAL VIRUSES BY ELECTRON MICROSCOPY.
R L Steere
Phytopatholo 50(9):656
Sep 1960 464.B P56
Electron microscopy, Morphology, Spherical viruses, Viruses.

1005-67
DIFFERENCE IN THE BEHAVIOR OF THE NICOTIANA LONGIFLORA WILDFIRE RESISTANCE LOCUS IN TOBACCO VARIETIES BURLEY 21 AND KY 61.
G W Stokes
Phytopatholo 50(10):770-772, TABS.
Oct 1960 464.8 P56
Nicotiana longiflora, Plant genetics, Tobacco, Wildfire (tobacco).

1006-67
CORYNESPORA BLIGHT OF SESAME.
W J Stone J P Jones
Phytopatholo 50(4):263-266
Apr 1960 464.B P56
Blight (sesame), Corynespora, Sesame.

1007-67
ETIOLOGY OF WILT IN FUSARIUM-INFECTED COTTON.
N S Subba-Rao
Phytopatholo 50(10):763-765, TABS.
Oct 1960 464.B P56
Cotton, Fusaria, Wilt (cotton).

1008-67
SOME EFFECTS OF TEMPERATURE ON THE TRANSMISSION OF CABBAGE MOSAIC VIRUS BY MYZUS PERSICAE.
E S Sylvester
J Econ Entom 57(4):53B-544, BIBL. 543-544, TABS.
Aug 1964 421 JB22
Insect vectors, Mosaic (cabbage), Myzus persica, Temperature.

1009-67
SOME EFFECTS OF TEMPERATURE ON THE TRANSMISSION OF PEA ENATION MOSAIC VIRUS AND ON THE BIOLOGY OF THE PEA APHID VECTOR.
E S Sylvester J Richardson
J Econ Entom 59(2):255-261, BIBL. 260-261, TABS.
Apr 1966 421 JB22
Acyrthosiphon pisum, Acyrthosiphon pisum, Enation mosaic (peas), Insect vectors, Lathyrus odoratus, Lathyrus odoratus, Plant temperature.

1010-67
A STRAIN OF PSEUDOMONAS FLUORESCENS ANTAGONISTIC TO PSEUDOMONAS PHASEOLICOLA AND OTHER BACTERIAL PLANT PATHOGENS.
M Teliz-Ortiz W H Burkholder
Phytopatholo 50(2):119-123
Feb 1960 464.8 P56
Bacterial diseases (plants), Pseudomonas fluorescens, Pseudomonas phaseolicola.

1011-67
VARIABILITY OF XANTHOMONAS VESICATORIA IN THE EVERGLADES AND LOWER EAST COAST OF FLORIDA.
P Thayer R E Stall
Phytopatholo 50(9):657
Sep 1960 464.B P56
Everglades, Florida, Peppers, Xanthomonas vesicatoria.

1012-67
OAT VARIETIES WITH ADULT PLANT FIELD RESISTANCE TO RACE 264 OF CROWN RUST.
T Theis H C Murphy M D Simons L Calpouzos D McVey
Phytopatholo 50(9):657
Sep 1960 464.8 P56
Crown rust (oats), Oats, Plant disease resistance, Race 264.

1013-67
DEVELOPMENT OF SAFFLOWER VARIETIES RESISTANT TO PHYTOPHTHORA ROOT ROT.
C A Thomas D D Rubis D S Black
Phytopatholo 50(2):129-130
Feb 1960 464.8 P56
Carthamus tinctorius L., Phytophthora drechsleri, Root rot (safflower), Safflower.

1014-67
INFLUENCE OF SOIL TEMPERATURE ON SEEDLING BLIGHT OF SMOOTH BROMEGRASS.
I J Thomason J G Dickson
Phytopatholo 50(1):1-7
Jan 1960 464.8 P56
Bromus, Bromus inermis, Seedling blight, Soil temperature.

1015-67
EUROPEAN ELM SCALE CONTROL INVESTIGATIONS.
H E Thompson
J Econ Entom 55(4):430-434, TABS.
Aug 1962 421 JB22
Gossyparia spuria, Gossyparia spuria, Insecticides, Pest control, Tree diseases.

1016-67
RELATION OF AGE OF POTATO PLANTS TO INFECTION BY VERTICILLIUM ALBO-ATRUM.
W J Tolmsoff
Phytopatholo 50(1):B6
Jan 1960 464.B P56
Potatoes, Verticillium albo-atrum.

1017-67
PATHOGENIC VARIATION OF CYTOSPORA RUBESCENS ISOLATES ON STONE FRUIT VARIETIES.
M Treshow J F Scholes W S Gardner
Phytopatholo 50(1):B6
Jan 1960 464.8 P56
Cytospora rubescens, Fruit.

1018-67
THE PARTIAL PURIFICATION AND BIOLOGICAL ACTIVITY OF AN ANTIFUNGAL ANTIBIOTIC PRODUCED BY A STRAIN OF STREPTOMYCES GRISEUS.
P Tsao C Leben G W Keitt
Phytopatholo 50(2):169-174
Feb 1960 464.8 P56
Antibiotics, Fungicides, Streptomyces griseus.

1019-67
PATHOGENICITY ON CITRUS OF THIELAVIOPSIS BASICOLA AND ITS ISOLATION FROM FIELD ROOTS.
P H Tsao S D Van Gundy
Phytopatholo 50(1):86-87
Jan 1960 464.8 P56
Citrus, Thielaviopsis basicola.

1020-67
EFFECT OF SOIL TEMPERATURE ON PATHOGENESIS OF THIELAVIOPSIS BASICOLA ON SWEET ORANGE ROOTS.
P H Tsao S D Van Gunoy
Phytopatholo 50(9):657
Sep 1960 464.B P56
Roots, Soil temperature, Sweet orange, Thielaviopsis basicola.

1021-67
PATHOGENICITY ON CITRUS OF THIELAVIOPSIS BASICOLA AND ITS ISOLATION FROM FIELD ROOTS.
P H Tsao S D Van Gundy
Phytopatholo 50(1):86-B7
Jan 1960 464.8 P56
Citrus, Thielaviopsis basicola.

1022-67
THE NATURAL OCCURRENCE OF TOBACCO RINGSPOT VIRUS.
J Tulte
Phytopatholo 50(4):296-298
Apr 1960 464.8 P56

20 1023-67

Ring spot (tobacco), Virus diseases (plants).

1023-67
INCIDENCE OF BUD-UNION CREASE IN CITRUS TREES GRAFTED ON TRIFOLIATE ROOTSTOCK IN THE DELTA DEL PARANA AND SAN PEDRO AREAS OF ARGENTINA.
M V F Valiela C Fortugno F Corizzi
Int Organ Citrus Virol Pr 3:1B2-1B6
1963 464.06 IN82
Argentina, Bud-union crease, Citrus, Rootstock, Trifoliate oranges.

1024-67
BLISTER RUST FUNGUS INOCULATIONS ON WHITE PINES IN MIST CHAMBERS.
E P Van tarsdel A J Riker
Phytopatholo 50(9):657
Sep 1960 464.8 P56
Blister rust (pinus strobus), Blister rust (pinus), Immunization, Pinus strobus.

1025-67
NECROTIC RINGSPOT, A NEW VIRUS DISEASE OF CULTIVATED BLUEBERRY.
E H Varney L C Raniere
Phytopatholo 50(4):241
Apr 1960 464.8 P56
Blueberries, Necrotic ring spot (blueberries), Viruses.

1026-67
INFLUENCE OF FUNGICIDES ON MICROORGANISMS ASSOCIATED WITH APPARENTLY HEALTHY STRAWBERRIES.
E K Vaughan
Phytopatholo 50(9):657-658
Sep 1960 464.8 P56
Fungicides, Microorganisms, Strawberries.

1027-67
INFLUENCE OF GROWING, CURING AND STORAGE PRACTICES ON DEVELOPMENT OF NECK ROT IN ONIONS.
E K Vaughn
Phytopatholo 50(1):87
Jan 1960 464.8 P56
Neck rot (onions), Plant curing, Plant physiology, Plant storage.

102B-67
EXOCORTIS IN CORSICA.
R Vogel C Bove J M Bove
Int Organ Citrus Virol Pr 3:134-13B
1963 464.06 IN82
Corsica, Exocortis (citrus).

1029-67
PSEUDOMONAS SOLANACEARUM IN ISRAEL.
Z Volcani J Palti
Plant Dis R 44(6):448-449
15 Jun 1960 1.9 P69P
Bacterial wilt (potatoes), Israel, Potatoes, Pseudomonas solanacearum, Tomatoes.

1030-67
DEAD BUTTON, A NON-TRANSMISSIBLE DISORDER OF LATE MONTMORENCY CHERRY.
B N Wadley
Phytopatholo 50(1):87
Jan 1960 464.8 P56
Cherries, Dead button, Late Montmorency cherry.

1031-67
SPRING DEAD SPOT OF BERMUDAGRASS.
D F Wadsworth H C Young Jr
Plant Dis R 44(7):516-51B
15 Jul 1960 1.9 P69P
Cynodon dactylon, Cynodon dactylon, Spring dead spot (bermudagrass).

1032-67
A VIRUS-CAUSED STUNT OF APRICOT AND ITS RELATIONSHIP TO CERTAIN OTHER STONEFRUIT VIRUS DISEASES.
H K Wagnon C W Nichols D Y Rosenberg
Phytopatholo 50(9):65B
Sep 1960 464.8 P56
Apricots, Fruit, Stunt (apricots), Virus diseases (plants).

1033-67
OBSERVATIONS ON THE NATURAL SPREAD OF THE SO-CALLED PEACH STUNT VIRUS IN A CALIFORNIA PEACH ORCHARD.
H K Wagnon J R Breece H E Williams D Y Rosenberg
Plant Dis R 44(7):4B8-490
15 Jul 1960 1.9 P69P
Peaches, Stunt (peaches).

1034-67
FURTHER STUDIES ON CITRUS SEEDLING YELLOWS.
J M Wallace A L Martinez R J Drake
Int Organ Citrus Virol Pr 3:36-39
1963 464.06 IN82
Seedling yellows (citrus).

1035-67
THE EFFECT OF HOST NUTRITION ON THE DEVELOPMENT OF EXOCORTIS IN PONCIRUS TRIFOLIATA.
L G Weathers
Phytopatholo 50(1):87
Jan 1960 464.8 P56
Host nutrition, Poncirus trifoliata.

1036-67
A NEW SOURCE OF RESISTANCE TO SPINACH BLIGHT.
R E Webb Bruce A Perry Henry A Jones D M McLean
Phytopatholo 50(1):54-56
Jan 1960 464.8 P56
Blight (spinach), Spinach.

1037-67
THE EFFECT OF TOBACCO MOSAIC VIRUS ON TOMATO YIELD.
P V V Weber
Phytopatholo 50(3):235-237
Mar 1960 464.8 P56
Crop yields, Mosaic (tobacco), Tomatoes.

103B-67
MAIZE SYNTHETICS FOR DISEASE RESISTANCE.
C C Wernham
Plant Dis R 44(7):49B-500
15 Jul 1960 1.9 P69P
Corn, Corn, Plant disease resistance, Plant synthetics.

1039-67
PATHOLOGICAL HISTOLOGY OF TABASCO PEPPER PLANTS INFECTED WITH TOBACCO ETCH VIRUS.
J C White N L Horn
Phytopatholo 50(9):65B
Sep 1960 464.8 P56
Etch (tobacco), Plant histology, Tabasco pepper, Virus diseases (plants).

1040-67
TIME OF APPEARANCE AND SIZE OF LOCAL LESIONS PRODUCED BY TWO STRAINS OF TOBACCO MOSAIC VIRUS.
S G Wildman C V Ford
Phytopatholo 50(9):677-6B0, TA8S.
Sep 1960 464.8 P56
Mosaic (tobacco), Nicotiana glutinosa, Tobacco.

1041-67
SEED DETERIORATION AS A FACTOR IN NUB-ROOT PRODUCTION IN COTTON.
A B Wiles J T Presley
Plant Dis R 44(7):472-473
15 Jul 1960 1.9 P69P
Cotton, Nub-root (cotton), Seed deterioration, Seedlings.

1042-67
EVALUATION OF COTTON STRAINS AND PROGENIES FOR RESISTANCE TO VERTICILLIUM WILT.
A B Wiles
Plant Dis R 44(6):4I9
I5 Jun 1960 I.9 P69P
Cotton, Plant disease resistance, Verticillium, Wilt (cotton).

1043-67
FLOWERING CHERRY, A RESERVOIR OF THE LITTLE CHERRY VIRUS.
J M Wilks E L Reeves
Phytopatholo 50(3):I88-I90
Mar I960 464.8 P56
Cherries, Little cherry (cherries), Prunus serrulata.

1044-67
DETERMINATION OF SOIL FUNGI ANTAGONISTIC TO FUSARIUM ROSEUM.
L E Williams
Phytopatholo 50(9):658-659
Sep 1960 464.8 P56
Fusarium roseum, Soil fungi.

1045-67
EFFECT OF GROWING CROPS AND CROP RESIDUES ON SOIL FUNGI AND SEEDLING BLIGHTS.
L E Williams A F Schmitthenner
Phytopathoio 50(1):22-25
Jan 1960 464.B P56
Plant residues, Seedling blight, Soil fungi.

1046-67
VEGETABLE DISEASES IN NORTH CAROLINA DURING 195B AND 1959.
N N Winstead D L Strider L H Person
Plant Dis R 44(7):49I-495
15 Jul 1960 I.9 P69P
Cucurbits, Vegetables.

1047-67
RESISTANCE TO BACTERIAL WILT IN EGGPLANT IN NORTH CAROLINA.
N N Winstead A Kelman
Plant Dis R 44(6):432-434
15 Jun I960 I.9 P69P
Bacterial wilt (eggplant), Eggplant,
Plant disease resistance.

104B-67
BACTERIA IN THE PERITHECIA OF HYPOXYLON PRUINATUM AND THEIR EFFECT ON ASCOSPORE GERMINATION AND COLONY DEVELOPMENT.
F A Wood D W French
Phytopathoio 50(9):659
Sep 1960 464.B P56
Ascospores, Bacteria, Hypoxylon pruinatum, Perithecia.

1049-67
COMPETITION BETWEEN TWO STRAINS OF TOBACCO MOSAIC VIRUS (TMV) ON LEAVES OF NICOTIANA GLUTINOSA.
J Wu I Rappaport
Phytopathoio 50(9):659
Sep 1960 464.8 P56
Mosaic (tobacco), Nicotiana glutinosa.

1050-67
SOIL INHIBITS INFECTION WITH TOBACCO NECROSIS VIRUS.
C E Yarwood
Plant Dis R 44(B):639-642
15 Aug 1960 1.9 P69P
Necrosis, Plant virus infection, Soils, Tobacco, Viruses.

1051-67
UREDOSPORE PRODUCTION BY UROMYCES PHASEOLI.
C E Yarwood
Phytopatholo 50(9):659-660
Sep 1960 464.B P56
Uredospores, Uromyces phaseoli.

1052-67
TOPICAL SUSCEPTIBILITY TO VIRUSES.
C E Yarwood
Phytopathoio 50(9):659
Sep 1960 464.B P56
Topical susceptibility, Virus diseases (plants).

1053-67
VEIN NECROSIS, ANOTHER SYSTEMICALLY INFECTIOUS STRAIN OF ALFALFA MOSAIC VIRUS IN BEAN.
W J Zaumeyer G Patino
Phytopatholo 50(3):226-231, BIBL.,230-23I
Mar 1960 464.B P56
Beans, Mosaic (alfalfa), Vein necrosis (alfalfa).

1054-67
A NEW RACE OF BEAN RUST IN MARYLAND.
W J Zaumeyer
Plant Dis R 44(7):459-462
15 Jul 1960 I.9 P69P
Beans, Plant disease resistance, Rust (beans).

1055-67
CHEMOTAXIS OF ZOOSPORES FOR ROOT EXUDATES IN RELATION TO INFECTION BY PHYTOPHTHORA CINNAMOMI.
G A Zentmyer
Phytopatholo 50(9):660
Sep 1960 464.8 P56
Chemotaxis, Exudates, Phytophthora cinnamomi, Roots,
Zoospores.

1056-67
STUDIES OF TWO BLUEBERRY STEM DISEASES RECENTLY FOUND IN EASTERN MASSACHUSSETS.
B M Zuckerman
Plant Dis R 44(6):409-415
15 Jun 1960 I.9 P69P
Blueberries, Canker (fruit).

Arthropods

1057-67
INITIAL FIELD OBSERVATIONS IN CALIFORNIA ON TRIOXYS PALLIDUS (HALIDAY), A RECENTLY INTRODUCED PARASITE OF THE WALNUT APHID.
R van den Bosch E I Schlinger K S Hagen
J Econ Entom 55(6):B57-B62
Dec I962 42I J822
Aphidine braconid, Chromaphis juglandicola,
Chromaphis juglandicola, Parasitic insects,
Trioxys pallidus.

105B-67
EFFECT OF THE BOLLWORM, HELIOTHIS ZEA, ON YIELD AND QUALITY OF COTTON.
P L Adkisson C F Bailey R L Hanna
J Econ Entom 57(4):44B-450
Aug I964 42I J822
Cotton, Crop yields, Heliothis zea, Heliothis zea (Boddie).

1059-67
TIMING OF DEFOLIANTS AND DESICCANTS TO REDUCE POPULATIONS OF THE PINK BOLLWORM IN DIAPAUSE.
P L Adkisson
J Econ Entom 55(6):949-95I
Dec I962 42I J822
Cotton, Defollants, Defoliants, Diapause,
Pectinophora gossyplella, Pectinophora gossyplella.

1060-67
SEED TREATMENT WITH PHORATE, DISULFOTON, AND OTHER INSECTICIDES TO CONTROL PEA INSECTS IN IRAQ.
A F Al-Azawi
J Econ Entom 59(4):859-B64, PL., TABS.
Aug 1966 42I JB22
Carbaryi, Carbophenothion, Dichiorvos, Disulfoton, DDT ,
Endosan, Endosulfan, Insecticides, Iraq, Pea insects,
Phorate, Phosphamidon, Phytomyza atricornis, Seed treatment,
Thrips tabaci, Trichiorfon.

106I-67
INTEGRATION OF THE HELIOTHIS NUCLEAR POLYHEDROSIS VIRUS INTO A BIOLOGICAL CONTROL PROGRAM ON COTTON.
G E Allen B G Gregory J R Brazzel
J Econ Entom 59(6):I333-1336
Dec 1966 42I JB22
Biological control (insects), Cotton, Heliothis,
Heliothis virescens (F.), Heliothis zea (Boddie),
Polyhedroses.

1062-67
THE RELATIONSHIP OF LYGUS BUGS AND THRIPS TO FRUIT DEFORMITY IN STRAWBERRIES.
W W Allen S E Gaede
J Econ Entom 56(6):B23-B25, TABS.
Dec 1963 421 J822
Frankiniella occidentalis (Pergande), Fruit deformity,
Lygus hesperus Knight, Strawberries.

1063-67
SOME NEW INFESTATIONS OF THE BALSAM WOOLLY APHID IN NORTH CAROLINA, WITH POSSIBLE MODES OF DISPERSAL.
G D Amman
J Econ Entom 59(3):508-51I
Jun I966 421 J822
Chermes piceae, Chermes piceae, Dispersion agents,
Infestation.

1064-67
CONTROL OF THE ALFALFA WEEVIL, HYPERA POSTICA, IN N.Y.
E J Armbrust G G Gyrisco
J Econ Entom 58(5):940-942
Oct 1965 421 J822
Azinphosmethyl, Hypera postica, Igepal, Methoxychlor,
New york, Stubble sprays.

1065-67
EFFECTS OF SPIDER MITE INFESTATIONS ON DENT CORN IN CALIFORNIA.
O G 8acon T Lyons R S 8askett
J Econ Entom 55(6):823-825, TABS.
Dec 1962 421 JB22
Corn, Plant injuries, Tetranychidae, Tetranychidae.

1066-67
THE EFFECTS OF PERCUSSION ON INSECT PESTS OF GRAIN.
S W 8ailey
J Econ Entom 55(3):301-304, TA8S.
Jun 1962 421 JB22
Grain, Insects, Percussion, Sitophilus granarius, Sitophilus granarius.

1067-67
THE GREEN RICE LEAFHOPPER, NEPHOTETTIX 81PUNCTATUS CINCTICEPS, AND ITS CONTROL IN KOREA.
Y H Bang 8 M Kae
J Econ Entom 56(6):773-776, 8I8L. 775-776, TABS.
Dec 1963 421 J822
Green rice leafhopper, Korea, Nephotettix bipunctatus cincticeps (Uhler).

1068-67
SPRING APPLICATIONS OF INSECTICIDES FOR CONTROL OF ALFALFA WEEVIL IN ALABAMA.
M H 8ass G H 8lake Jr
J Econ Entom 5B(3):527-529
Jun 1965 421 JB22
Alabama, Alfalfa, Hypera postica, Hypera postica (Gyllenhal), Insecticide application.

1069-67
OBSERVATIONS ON THE 810LOGY AND CULTURAL-INSECTICIDAL CONTROL OF PROSAPIA 8ICINCTA, A SP1TTLE8UG, ON COASTAL BERMUDAGRASS.
E W Beck
J Econ Entom 56(6):747-752, TA8S.
Dec 1963 421 J822
Cercopidae, Chemical control (insects), Cultural control (insects), Cynodon dactylon, Insect biology, Prosapia bicincta (Say).

1070-67
TWIG FEEDING BY THE SMALLER EUROPEAN ELM 8ARK 8EETLE ON DIFFERENT KINDS OF TREES.
W B Becker R A Mankowsky
J Econ Entom 5B(1):132-134
Feb 1965 421 JB22
Hylurgopinus rufipes, Scolytus multistriatus (Marsham), Trees, Ulmus americana, Ulmus americana L.

1071-67
METHODS OF ARTIFICIAL INFESTATION OF CORN WITH THE EARWORM, HELIOTHIS ZEA.
S E Bennett L M Josephson
J Econ Entom 55(5):797-798
Oct 1962 421 J822
Corn, Heliothis zea, Heliothis zea (Boddie).

1072-67
CONTROLLING HESSIAN FLY WITH PHORATE AND DISULFOTON.
J H 8igger P E Johnson R O Weibel
J Econ Entom 5B(6):1083-1085
Dec 1965 421 J822
Disulfoton, Mayetiola destructor, Mayetiola destructor Say, Wheat.

1073-67
TESTS TO DETERMINE VARIETAL REACTION TO RICE WATER WEEVIL.
C C 8owling
J Econ Entom 56(6):893-894
Dec 1963 421 JB22
Lissorhoptrus oryzophilus, Lissorhoptrus oryzophilus (Kuschel).

1074-67
THE INFESTABILITY OF STORED PADDY 8Y SITOPHILUS SASAKII (TAK.) AND RHYZOPERTHA DOMINICA (F.).
M H Breese
8ull Entomol R 51(3):599-630
Nov 1960 421 887
Rhyzopertha dominica (F.), Rice, Sitophilus sasakii (Tak.).

1075-67
RESISTANCE OF 30 COMMERCIAL CRUCIFEROUS VARIETIES TO THE STRIPED FLEA BEETLE, PHYLLOTRETA STRIOLATA.
C H 8rett J D Rudder
J Econ Entom 59(3):769, TABS.
Jun 1966 421 J822
Cruciferae, Phyllotreta striolata, Phyllotreta striolata.

1076-67
CONTROL OF 8LACK SCALE IN FLORIDA.
R F Brooks W L Thompson
J Econ Entom 55(5):813-814
Oct 1962 421 JB22
Saissetia oleae.

1077-67
EFFECT OF TRICHOGRAMMA RELEASES ON PARASITISM OF SUGARCANE BORER EGGS.
R W Burrell W J McCormick
J Econ Entom 55(6):880-882
Dec 1961 421 J822
Diatraea saccharalis, Diatraea saccharalis, Insect eggs, Parasitic insects, Trichogramma.

1078-67
VARIETAL RESISTANCE OF 8EANS TO THE MEXICAN 8EAN BEETLE.
W Campbell C H Brett
J Econ Entom 59(4):899-902, PL., TABS.
Aug 1966 421 JB22
Beans, Epilachna varivestis, Epilachna varivestis, Resistance.

1079-67
THE EFFECT OF SPIDER MITE POPULATIONS ON YIELD AND QUALITY OF COTTON.
T D Canerday F S Arant
J Econ Entom 57(4):553-556, TABS.
Aug 1964 421 JB22
Cotton, Crop yields, Tetranychus cinnabarius (8oisduval).

10B0-67
FURTHER STUDIES OF DAMAGE TO SAFFLOWER PLANTS BY THRIPS AND LYGUS 8UGS.
C A Carlson
J Econ Entom 59(1):138-141
Feb 1966 421 J822
Crop yields, Frankliniella occidentalis (Pergande), Lygus bugs, Lygus hesperus Knight, Safflower, Thrips.

10B1-67
DAMAGE TO SAFFLOWER PLANTS BY THRIPS AND LYGUS BUGS AND A STUDY OF THEIR CONTROL.
E C Carlson
J Econ Entom 57(1):140-145, TABS.
Feb 1964 421 J822
Frankliniella occidentalis, Insect control, Lygus bugs, Safflower, Western flower thrips.

10B2-67
EARLY-SEASON APPLICATION OF DDT FOR PINK BOLLWORM CONTROL.
A J Chapman L W Noble O T Robertson G L Smith
J Econ Entom 56(6):900-901
Dec 1963 421 JB22
DDT , Insecticide application, Pectinophora gossypiella, Pectinophora gossypiella (Saunders), Seasonal applications.

1083-67
FIELD SELECTION OF DIFFERENT LOG ODORS BY SCOLYTID 8EETLES.
J A Chapman
Can Entom 95(7):673-676
Jul 1963 421 C16
Air, Logs, Odors, Scolytidae.

1084-67
RELATIONSHIPS 8ETWEEN PLANT HEIGHT AND YIELD OF FIELD CORN AS AFFECTED BY THE EUROPEAN CORN BORER.
H C Chiang F G Holdanay
J Econ Entom 5B(5):932-938
Oct 1965 421 JB22
Corn, Crop yields, Ostrinia nubilalis.

10B5-67
THE ABSORPTION OF 1,2-DIBROMOETHANE 8Y ORANGES AND 8Y MATERIALS USED IN THEIR FUMIGATION.
I M Coggiola F E Huelin
J Agr Food Ch 12(2):192-196, TABS.
Mar 1964 381 J8223
Ethylene dibromide, Oranges.

1086-67
CONTROL OF THE 8LACK VINE WEEVIL ON CONCORD GRAPES IN CENTRAL WASHINGTON.
W W Cone
J Econ Entom 5B(1):115-119, 8I8L.11B-119, TABS.

Feb 1965 421 JB22
Brachyrhinus sulcatus, Brachyrhinus sulcatus (F), Grapes, Insect control, Washington.

1087-67
CEREAL APHID CAPTURE IN YELLOW BAFFLE TRAYS.
B F Coon H B Rinick Jr
J Econ Entom 55(3):407-408
Jun 1962 421 JB22
Aphididae, Grain, Grain, Insect traps, Water.

1088-67
BARK PENETRATION AND UPTAKE OF SYSTEMIC INSECTICIDES FROM SEVERAL TREATMENT FORMULATIONS IN WHITE PINES.
H C Coppel D M Norris Jr
J Econ Entom 59(4):928-931, TABS.
Aug 1966 421 JB22
Bark, Diprion similis, Systemic insecticides.

1089-67
CONTROL OF SEVERAL LATE-SEASON COTTON PESTS IN FIELD EXPERIMENTS IN 1962.
C B Cowan Jr J W Davis
J Econ Entom 56(6):790-793, TABS.
Dec 1963 421 JB22
Anthonomus grandis Boheman, Cotton, Heliothus zea (Boddie), Insect pests, Insecticides, Tetranychus desertorum Banks.

1090-67
MEXICO-UNITED STATES COOPERATIVE PLANT PEST CONTROL PROGRAMS.
L F Curl
J Econ Entom 57(4):450-452
Aug 1964 421 JB22
Mexico, Plant pest control, United States.

1091-67
FOUR LITTLE-KNOWN PESTS OF SWEETPOTATO ROOTS.
F P Cuthbert Jr W J Reid Jr
J Econ Entom 58(3):581-583
Jun 1965 421 JB22
Chaetocnema confinis Crotch, Notoxus calcaratus Horn, Plectris aliena Chapin, Sweetpotatoes, Systena frontalis (F.).

1092-67
PRELIMINARY STUDIES ON THE EFFECT OF LYGUS BUGS ON THE SET AND YIELD OF TOMATOES.
A C Davis F L McEwen R W Robinson
J Econ Entom 56(4):532-533, TABS.
Aug 1963 421 JB22
Crop yields, Fruit setting, Lygus lineolaris (Palisot de Beauvois), Tomatoes.

1093-67
CONTROL OF SEVERAL COTTON PESTS WITH SYSTEMIC INSECTICIDES.
J W Davis W C Watkins Jr C B Cowan Jr R L Ridgway
J Econ Entom 59(1):159-162
Feb 1966 421 JB22
Aphis gossypii Glover, Cotton, Frankliniella sp., Liriomyza brassicae, Psallus seriatus (Reuter), Systemic insecticides, Tetranychus desertorum Banks.

1094-67
CONTROL OF THE SOUTHERN POTATO WIREWORM, CANODERUS FALLI, ON EARLY-CROP POTATOES.
A Day F P Cuthbert Jr W J Reid Jr
J Econ Entom 57(4):468-470, TABS.
Aug 1964 421 JB22
Canoderus falli Lane, Potatoes, Southern potato wireworm.

1095-67
SUPPRESSION OF EUROPEAN RED MITE BY MILDEW FUNGICIDE PROGRAMS.
R W Dean D H Palmiter K D Hickey
J Econ Entom 59(3):742
Jun 1966 421 JB22
Panonychus ulme, Panonychus ulmi, Podosphaera leucotricha.

1096-67
A METHOD AND MACHINE FOR DETECTING LIVING INTERNAL INSECT INFESTATION IN WHEAT.
N M Dennis R W Decker
J Econ Entom 55(2):199-203
Apr 1962 421 JB22
Chemistry, Equipment, Feed grains, Insect control, Wheat.

1097-67
EVALUATION OF BROWN WHEAT MITE CONTROL ON YIELD OF WINTER WHEAT IN KANSAS.
L J DePew
J Econ Entom 55(6):1010-1011
Oct 1962 421 JB22
Crop yields, Petrobia latens, Petrobia latens, Wheat.

1098-67
EVALUATION OF INSECTICIDES FOR CONTROL OF THE SMALLER EUROPEAN ELM BARK BEETLE.
C C Doane
J Econ Entom 55(3):414-415
Jun 1962 421 JB22
Hylurgopinus rufipes, Hylurgopinus rufipes, Insect control, Insecticides.

1099-67
CONTROL OF ROOT MAGGOTS ON RADISH, TURNIP, AND RUTABAGA IN WISCONSIN.
J F Doane R K Chapman
J Econ Entom 55(2):160-164, TABS.
Apr 1962 421 JB22
Maggots, Radishes, Roots, Rutabagas, Turnips, Wisconsin.

1100-67
GRANULAR PHORATE AND DI-SYSTON FOR CONTROL OF APHIDS ON FIELD-GROWN EASTER LILY.
C F Doucette
J Econ Entom 55(5):812-813
Oct 1962 421 JB22
Aphididae, Disulfoton, Lilium longiflorum, Phorate.

1101-67
THE LEWIS MITE, EOTETRANYCHUS LEWISI, ON GREENHOUSE POINSETTIA.
C F Doucette
J Econ Entom 55(1):139-140
Feb 1962 421 JB22
Eotetranychus lewisi, Euphorbia pulcherrima, Euphorbia pulcherrima, Greenhouse culture, Lewis mite.

1102-67
SELECTION IN COTTON FOR ANTIBIOSIS TO THE BOLL WEEVIL, ANTHONOMUS GRANDIS.
G A Douglas
J Econ Entom 59(1):32-34
Feb 1966 421 JB22
Anthonomus grandis, Anthonomus grandis, Anthonomus grandis, Antibiosis, Cotton.

1103-67
BIOLOGY OF THE PINK SCAVENGER CATERPILLAR AND ITS CONTROL IN CORN.
W A Douglas C A Henderson J M Langston
J Econ Entom 55(5):651-655, TABS.
Oct 1962 421 JB22
Corn, Insect biology, Insect control, Pyroderces rileyi Walsingham, Sathrobrota rileyi.

1104-67
SMALL-SCALE FIELD TESTS IN TEXAS WITH SIX SYSTEMIC INSECTICIDES FOR THE CONTROL OF CATTLE GRUBS.
R O Drummond
J Econ Entom 56(5):632-634
Oct 1963 421 JB22
Hypoderma, Hypoderma, Systemic insecticides, Texas.

1105-67
CONTENTS OF CORN SILKS IN RELATION TO CORN EARWORM INJURY.
W G Eden F S McCain B W Arthur
J Econ Entom 55(5):802
Oct 1962 421 JB22
Corn silks, Heliothis zea, Heliothis zea Boddie, Plant pest resistance.

1106-67
PROTECTION OF DATES FROM INJURY CAUSED BY THE APACHE CICADA IN CALIFORNIA.
H S Elmer
J Econ Entom 56(6):875-876
Dec 1963 421 JB22
Apache cicada, California, Dates, Diceroprocta apache (Davis).

1107-67
EXPERIMENTS FOR THE CONTROL OF A JUNIPER TIP MIDGE.
L L English
J Econ Entom 56(6):880-883
Dec 1963 421 JB22

20 1109-67

Insecticides, Juniper tip midge,
Juniperus virginiana canaerti Seneci, Oligotrophus.

1109-67
INSECTS DESTRUCTIVE TO BITTERBRUSH FLOWERS AND SEEDS IN SOUTHWESTERN IDAHO.
R B Ferguson M M Furniss J Y Basile
J Econ Entom 56(4):459-462, TABS.
Aug 1963 421 J822
Idaho, Insect pests, Purshia.

1110-67
CULTURAL CONTROL OF OVERWINTERING BOLLWORM AND TOBACCO BUDWORM.
L C Fife H M Graham
J Econ Entom 59(5):1123-1125
Oct 1966 421 JB22
Heliothis virescens, Heliothis virescens (F.),
Heliothis zea, Heliothis zea (Boddie), Hibernation.

1111-67
INTEGRATED CONTROL OF CYCLODIENE-RESISTANT CARROT RUST FLY.
D G Finlayson H G Fulton M D Noble
J Econ Entom 59(5):1082-1085
Oct 1966 421 JB22
Cyclodiene, Psila rosae, Psila rosae (F.).

1112-67
CONTROL OF THE PINE ROOT COLLAR WEEVIL, HYLOBIUS RADICIS.
R J Finnegan K E Stewart
J Econ Entom 55(4):483-486, TABS.
Aug 1962 421 JB22
Hylobius radicis, Hylobius radicis, Insect control.

1113-67
PRESENT STATUS IN CONTROL OF THE EUROPEAN RED MITE IN OHIO WITH SUMMER ACARICIDES.
H Y Forsythe Jr.
J Econ Entom 58(5):B11-B14
Oct 1965 421 J822
Acaricides, Mites, Ohio, Panonychus ulmi, Panonychus ulmi.

1114-67
EVALUATING THE CONTROL OF THE CLOVER ROOT CURCULIO LARVA ON ALFALFA.
H Y Forsythe Jr G G Gyrisco
J Econ Entom 55(6):906-908
Dec 1962 421 J822
Alfalfa, Insecticides, Larvae, Sitona hispidula,
Sitona hispidula.

1115-67
FIELD TESTS FOR THE CONTROL OF CERTAIN ALFALFA INSECT PESTS IN NEW YORK.
H Y Forsythe Jr D D Hardee G G Gyrisco
J Econ Entom 55(6):828-830, TABS.
Dec 1962 421 J822
Alfalfa, Insecticides, Insects, New York, Toxicology.

1116-67
A RELATIONSHIP OF THE PLANT TO PARASITISM OF EUROPEAN CORN BORER BY THE TACHINID PARASITE LYDELLA GRISESCENS.
R T Franklin F G Holdaway
J Econ Entom 59(2):440-441
Apr 1966 421 J822
Lydella grisescens, Ostrinia nubilalis,
Ostrinia nubilalis (Hubner), Parasitism.

1117-67
AN INSTANCE OF DELAYED EMERGENCE OF THE DOUGLAS-FIR BEETLE AND ITS EFFECT ON AN INFESTATION IN SOUTHERN UTAH.
M M Furniss
J Econ Entom 58(3):440-442
Jun 1965 421 J822
Dendroctonus pseudotsugae,
Dendroctonus pseudotsugae Hopkins, Utah.

1118-67
RESISTANCE OF SMALL GRAINS TO THE CEREAL LEAF BEETLE.
R L Gallun R Ruppel E H Everson
J Econ Entom 59(4):827-829, TABS.
Aug 1966 421 JB22
Cereal leaf beetle, Insect resistant plants,
Oulema melanopus, Small grains.

1119-67
A NEW RECORD OF A WHITEFLY, ALEURODES SPIRAEOIDES QUAINTANCE, INFESTING COTTON, WITH A NOTE ON ITS PARASITES.
D Gerling
J Econ Entom 59(2):482-483
Apr 1966 421 JB22
Aleurodes spiraeoides Qualntance, Cotton, Parasitism,
Whitefly.

1120-67
SEASONAL LIGHT-TRAP COLLECTIONS OF LEPIDOPTEROUS COTTON INSECTS IN SOUTH TEXAS.
P A Glick
J Econ Entom 58(5):880-882
Oct 1965 421 J822
Cotton, Lepidoptera, Light traps, Texas.

1121-67
JAPANESE BEETLE DAMAGE TO SOYBEANS AND CORN.
G E Gould
J Econ Entom 56(6):776-781
Dec 1963 421 JB22
Corn, Popillia japonica, Popillia japonica Newman, Soybeans.

1122-67
SEASONAL DISTRIBUTION OF HELIOTHIS VIRESCENS AND H. ZEA ON TOBACCO IN KENTUCKY.
G L Greene R Thurston
J Econ Entom 59(5):1054-1056
Oct 1966 421 J822
Heliothis virescens (F.), Heliothis zea (Boddie), Kentucky,
Tobacco.

1123-67
SYSTEMIC INSECTICIDES FOR THE CONTROL OF WESTERN FLOWER THRIPS ON BULB ONIONS.
R L Hale H H Shorey
J Econ Entom 58(4):793-794
Aug 1965 421 J822
Insecticides, Onions, Systemic insecticides, Thrips tabaci,
Western flower thrips.

1124-67
SEQUENTIAL SAMPLING FOR USE IN CONTROL OF THE CABBAGE LOOPER ON CAULIFLOWER.
D G Harcourt
J Econ Entom 59(5):1190-1192
Oct 1966 421 J822
Cauliflower, Sequential sampling, Trichoplusia ni,
Trichoplusia ni (Hubner).

1125-67
TESTS WITH SYSTEMIC
INSECTICIDES FOR CONTROL OF INSECTS AND CERTAIN DISEASES ON POTATOES.
J A Harding
J Econ Entom 55(1):62-65, TABS.
Feb 1962 421 J822
Aphididae, Insecticides, Plant disease control,
Plant insect control, Potatoes, Psyllidae, Whiteflies.

1126-67
GRANULATED SYSTEMIC INSECTICIDES FOR VEGETABLE INSECT CONTROL IN SOUTH TEXAS.
J A Harding D A Wolfenbarger
J Econ Entom 56(5):687-689, TABS.
Oct 1963 421 J822
Insects, Systemic insecticides, Texas, Vegetables.

1127-67
PARASITES OF THE EUROPEAN PINE SHOOT MOTH, RHYACIONIA BUOLIANA.
D M Harman H M Kulman
J Econ Entom 55(6):1007-1008
Dec 1962 421 J822
Larvae, Parasitic insects, Pupae, Rhyacionis buoliana,
Rhyacionia buoliana.

1128-67
EFFECT OF THE PEA APHID ON ALFALFA IN SOUTHERN ALBERTA.
A M Harper C E Lilly
J Econ Entom 59(6):1426-1427
Dec 1966 421 J822
Acyrthosiphon pisum, Acyrthosiphon pisum, Alberta, Alfalfa.

1129-67
GRANULATED INSECTICIDES FOR CONTROL OF SOME CORN PESTS.
E P Harrison
J Econ Entom 58(1):137-139
Feb 1965 421 J822
Corn, Insect control, Insecticides, Ostrinia nubilalis,
Ostrinia nubilalis.

1130-67
INSECTICIDAL FIELD SCREENING TESTS AGAINST THE FALL ARMYWORM IN SORGHUM AND CORN.
C F Henderson H G Kinzer J H Hatchett
J Econ Entom 55(6):1005-1006
Dec 1962 421 JB22
Corn, Insecticides, Laphygma frugiperda, Sorghum, Spodoptera frugiperda.

1131-67
FIELD INSECTICIDE SCREENING TESTS AGAINST THE CORN FLEA BEETLE.
C F Henderson H G Kinzer J H Hatchett E G Thompson
J Econ Entom 55(6):1008-1009
Dec 1962 421 JB22
Chaetocnema pulicaria, Chaetocnema pulicaria, Insect control, Insecticides, Sorghum.

1132-67
GROWTH AND YIELD OF GRAIN SORGHUM INFESTED IN THE WHORL WITH FALL ARMYWORM.
C F Henderson H G Kinzer E G Thompson
J Econ Entom 59(4):1001-1003, PL.
Aug 1966 421 JB22
Plant physiology, Sorghum, Spodoptera frugiperda, Spodoptera frugiperda, Whorl.

1133-67
FLOWER THRIPS IN OUTDOOR ROSE FIELDS AND AN IMPROVED METHOD OF EXTRACTING THRIPS FROM ROSE FLOWERS.
T J Henneberry F F Smith D Shriver
J Econ Entom 57(3):410-412
Jun 1964 421 JB22
Frankliniella tritici, Frankliniella tritici, Rosa, Rosa.

1134-67
RELATIVE SEASONAL ABUNDANCE OF BOLLWORM AND TOBACCO BUDWORM LARVAE ON COTTON IN GEORGIA.
J W Hodges R J Beshear C M Beckham
J Econ Entom 59(1):128-131
Feb 1966 421 JB22
Cotton, Georgia, Heliothis virescens, Heliothis virescens (F.), Heliothis zea, Heliothis zea (Boddie), Larvae.

1135-67
HEPTACHLOR AS A SYSTEMIC INSECTICIDE AGAINST THE WHEAT STEM SAWFLY, CEPHUS CINCTUS NORT.
N D Holmes L K Peterson
Can Entom 95(8):792-796
Aug 1963 421 C16
Cephus cinctus Nort., Heptachlor, Systemic insecticide.

1136-67
RESISTANCE OF SPRING WHEATS TO THE WHEAT STEM SAWFLY, CEPHUS CINCTUS NORT. (HYMENOPTERA: CEPHIDAE II. RESISTANCE TO THE LARVA.
N D Holmes L K Peterson
Can Entom 94(4):348-365
Apr 1962 421 C16
Cephidae, Cephus cinctus, Cephus cinctus Nort., Hymenoptera, Larvae, Plant pest resistance, Wheat.

1137-67
FIELD EXPERIMENTS FOR CONTROL OF THE BOLL WEEVIL, BOLLWORM SPP., AND THE COTTON APHID ON COTTON IN 1960-62.
A R Hopkins H M Taft
J Econ Entom 57(4):509-511
Aug 1964 421 JB22
Anthonomus grandis, Anthonomus grandis Boheman, Aphis gossypii, Aphis gossypii Glover, Cotton, Heliothis spp..

1138-67
NEW MATERIALS FOR THE CONTROL OF THE APPLE RUST MITE.
S C Hoyt
J Econ Entom 55(5):639-641, TABS.
Oct 1962 421 JB22
Vasates schiechtendali, Vasates schiechtendali (Nalepa).

1139-67
FURTHER FIELD EXPERIMENTS ON THE USE OF BACILLUS THURINGIENSIS AND CHEMICAL INSECTICIDES FOR THE CONTROL OF THE EUROPEAN CORN BORER, OSTRINIA NUBILALIS, ON SWEET CORN IN SOUTHWESTERN QUEBEC.
M Hudon
J Econ Entom 56(6):804-808, BIBL. 807-808
Dec 1963 421 JB22
Bacillus thuringiensis var. thuringiensis Berlinger, Insecticides, Ostrinia nubilalis, Ostrinia nubilalis (Hubner), Quebec, Sweetcorn.

1140-67
THE INFESTATION OF CANADIAN PRODUCE INSPECTED IN UNITED KINGDOM PORTS BETWEEN 1953 AND 1959.
E T Hurlock
Can Entom 95(12):1263-1284, BIBL. 1283-1284
Dec 1963 421 C16
Canada, Grain, Insect infestation, Oilseeds, United Kingdom.

1141-67
THE CONTROL OF YELLOW TEA MITE, HEMITARSONEMUS LATUS (BANKS), WITH DDT ON COTTON IN UGANDA.
W R Ingram
Bull Entomol R 51(3):557-582
Nov 1960 421 BB7
Cotton, Hemitarsonemus latus (Banks), DDT , Tea, Uganda.

1142-67
STABILITY OF RESISTANCE TO PEA APHID AND SPOTTED ALFALFA APHID IN SEVERAL ALFALFA CLONES UNDER VARIOUS TEMPERATURE REGIMES.
A Isaak E L Sorensen R H Painter
J Econ Entom 58(1):140-143, BIBL. 142-143, TABS.
Feb 1965 421 JB22
Acyrthosiphon pisum, Acyrthosiphon pisum (Harris), Alfalfa, Plant temperature, Therioaphis maculata, Therioaphis maculata (Buckton).

1143-67
GAMMA-BHC LIQUID SEED DRESSING FOR THE CONTROL OF TURNIP FLEA BEETLE.
H R Jameson
J Sci Food A 11(9):528-534, TABS.
Sep 1960 3B2 S012
Benzene hexachloride, Chrysomelidae, Seed dressing, Seed treatment.

1144-67
THE INFLUENCE OF A VIRUS DISEASE AND PARASITES ON SPILONOTA OCELLANA IN APPLE ORCHARDS.
R P Jaques H T Stultz
Can Entom 98(10):1035-1045, BIBL. 1044-1045, TABS.
Oct 1966 421 C16
Agathis lactinctus (Cresson), Apples, Parasitism, Spilonata ocellana, Spilonota ocellana, Virus diseases (plants).

1145-67
POPULATION COUNTS VS. NYMPHS PER GRAM OF PLANT MATERIAL IN DETERMINING DEGREE OF ALFALFA RESISTANCE ON THE POTATO LEAFHOPPER.
J L Jarvis W R Kehr
J Econ Entom 59(2):427-430
Apr 1966 421 JB22
Alfalfa, Empoasca fabae, Empoasca fabae (Harris), Nymphs, Plant hardiness.

1146-67
CONTROL OF THE STEM BORER BACTRA VERUTANA ON CYPERUS PAPYRUS.
R N Jefferson W A Humphrey
J Econ Entom 57(3):385-386
Jun 1964 421 JB22
Bactra verutana, Cyperus papyrus.

1147-67
CONTROL OF LAWN MOTHS IN SOUTHERN CALIFORNIA.
R N Jefferson I M Hall F S Morishita
J Econ Entom 57(1):150-152
Feb 1964 421 JB22
California, Crambus bonifatellus, Crambus sperryellus, Insect control, Lawn moths.

1148-67
THE COMPARATIVE PREFERENCE OF INSECTS FOR GLANDED AND GLANDLESS COTTONS.
J N Jenkins F G Maxwell H N Lafever
J Econ Entom 59(2):352-356, BIBL. 355-356
Apr 1966 421 JB22
Alabama argillacea (Hubner), Chrysomelidae, Cotton, Gastrophysa cyanea (Melsheimer), Glands (plants), Heliothis zea (Boddie), Larvae, Maecolaspis flavida (Say).

1149-67
DEVELOPMENTS IN CONTROL OF THE GRAPE MEALYBUG.
F Jensen D Flaherty E M Stafford H Kido
J Econ Entom 57(3):372-374
Jun 1964 421 JB22

20 1150-67

Insect control, Pseudococcus maritimus,
Pseudococcus maritimus.

1150-67
HELICOPTER APPLICATION OF GUTHION FOR THE CONTROL OF THE DOUGLAS-FIR CONE MIDGE.
N E Johnson
J Econ Entom 56(5):600-603, BIBL. 602-603, TABS.
Oct 1963 421 JB22
Aircraft disinfestation, Azinphosmethyl,
Contarinia oregonensis Foote, Douglas-fir cone midge.

1151-67
METHODS OF ARTIFICIALLY INFESTING CORN WITH THE CORN EARWORM AND FACTORS INFLUENCING RESISTANCE.
L M Josephson S E Bannett E E Burgess
J Econ Entom 59(6):1322-1324
Dec 1966 421 JB22
Artificial infestation, Crop resistance, Heliothis zea,
Heliothis zea.

1152-67
LYGUS HESPERUS AS AN ECONOMIC INSECT ON MAGNOLIA NURSERY STOCK.
C S Koehler
J Econ Entom 56(3):421-422
Jun 1963 421 JB22
Lygus hesperus Knight, Magnolia,
Nursery stock (horticulture).

1153-67
TWO WILD HOST PLANTS FOR THE BOLLWORM IN HONDURAS.
P Kraemer
J Econ Entom 59(6):1531
Dec 1966 421 JB22
Heliothis zea, Heliothis zea, Honduras, Host plants.

1154-67
GRANULAR APPLICALTION OF SYSTEMICS FOR CONTROL OF EUROPEAN PINE SHOOT MOTH.
H M Kulman C K Dorsey
J Econ Entom 55(3):304-305
Jun 1962 421 JB22
Granules, Insecticides, Rhyacionia buoliana,
Rhyacionia buoliana.

1155-67
EFFECTS OF DISBUDDING ON THE SHOOT MORTALITY, GROWTH, AND BUD PRODUCTION IN RED AND SUGAR MAPLES.
H M Kulman
J Econ Entom 58(1):23-26
Feb 1965 421 JB22
Acer rubrum, Acer rubrum, Acer saccharum, Acer saccharum,
Plant budding, Plant growth inhibitors, Plant physiology.

1156-67
A SAMPLING UNIT FOR THE JACK-PINE BUDWORM, CHORISTONEURA PINUS.
H M Kulman A C Hodson
J Econ Entom 55(5):801-802
Oct 1962 421 JB22
Choristonaura pinus, Choristoneura pinus, Larvae,
Sampling (statistics).

1157-67
NATURAL CONTROL OF THE EASTERN TENT CATERPILLAR AND NOTES ON ITS STATUS AS A FOREST PEST.
H M Kulman
J Econ Entom 58(1):66-70
Feb 1965 421 JB22
Forest insects, Insect control, Malacosoma americanum,
Malacosoma americanum (F), Prunus serotina Ehrh.

1158-67
CONTROL OF THE NATIVE HOLLY LEAF MINER, PHYTOMYZA ILICICOLA (DIPTERA: AGROMYZIDAE).
L A Kulp
J Econ Entom 56(6):736-739, BIBL. 738-739, TABS.
Dec 1963 421 JB22
Agromyzidae, Diptera, Ilex opaca, Native holly leaf miner,
Phytomyza ilicicola.

1159-67
CHEMICAL FACTORS INFLUENCING HOST SELECTION BY THE MEXICAN BEAN BEETLE EPILACHNA VARIVESTIS MULS.
J B LaPidus R W Cleary R H Davidson F W Fisk M G Augustine O
J Agr Food Ch 11(6):462-463, BIBL. 463
Nov 1963 3B1 J8223
Epilachne varivestis, Epilachna varivestis Muls,
Plant hosts, Plant pest resistance.

1160-67
A SIMPLE TECHNIQUE FOR RECOVERING INSECTS FROM SORGHUM HEADS IN INSECTICIDE TESTS.
M L Laster R E Furr
J Econ Entom 55(5):798
Oct 1962 421 JB22
Insect removal, Insecticides, Insects, Sorghum.

1161-67
FOILAGE-FEEDING LEPIDOPTERA ON YOUNG NONBEARING APPLE TREES IN WISCONSIN.
E F Legner E R Oatman
J Econ Entom 55(4):552-554
Aug 1962 421 JB22
Apple trees, Insect control, Leaves, Lepidoptera, Wisconsin.

1162-67
NATURAL BIOTIC CONTROL FACTORS OF THE EYE-SPOTTED BUD MOTH, SPILONOTA OCELLANA ON APPLE IN WISCONSIN.
E F Legner E R Oatman
J Econ Entom 56(6):730-732
Dec 1963 421 JB22
Apples, Natural control (insects), Spilonota ocellana,
Spilonota ocellana, Wisconsin.

1163-67
ATRACTOTOMUS MALI AND CAMPYLOMMA VERBASCI (HETEROPTERA: MIRIDAE) ON APPLES IN CONN.
David E Leonard
J Econ Entom 58(5):1031
Oct 1965 421 JB22
Apples, Atractotomus mali, Campyloma verbasci, Connecticut,
Heteroptera, Miridae.

1164-67
MYRISTICIN, AN INSECTICIDE AND SYNERGIST OCCURRING NATURALLY IN THE EDIBLE PARTS OF PARSNIPS.
E P Lichtenstein J E Casida
J Agr Food Ch 11(5):410-415, TABS.
Sep 1963 3B1 JB223
Insecticidal plants, Insecticide synergists, Myristicin,
Parsnips.

1165-67
EFFECT OF LIGHT AND HUMIDITY ON THE ABSORPTION AND TRANSLOCATION OF DIMETHOATE IN THE COTTON PLANT.
D A Lindquist J Hacskaylo T B Davich
J Econ Entom 58(3):415-418
Jun 1965 421 JB22
Absorption, Cotton, Dimethoate, Humidity, Light,
Plant translocation.

1166-67
THE EFFECT OF BOLL WEEVIL INFESTATIONS ON YIELD AND QUALITY OF COTTON.
E P Lloyd M E Merkl G B Crowe
J Econ Entom 55(2):225-227, TABS.
Apr 1962 421 JB22
Anthonomus grandis, Anthonomus grandis, Cotton, Crop yields.

1167-67
CRITICAL PERIOD FOR CONTROLLING THE SUGARCANE BORER IN SUGARCANE IN LOUISIANA.
W H Long E J Concienne
J Econ Entom 57(3):350-353
Jun 1964 421 JB22
Diatraea saccharalis, Diatraea saccharalis, Louisiana,
Sugarcane.

1168-67
THE INFLUENCE OF SPRAY PROGRAMS ON THE FAUNA OF APPLE ORCHARDS IN NOVA SCOTIA. XI. EFFECTS OF LOW DOSAGES OF DDT ON PREDATOR POPULATIONS.
F T Lord
Can Entom 94(2):204-216, BIBL. 215-216
Feb 1962 421 C16
Apples, DDT , Insect populations, Predaceous insects,
Spraying.

1169-67
EVALUATION OF DAMAGE TO LINT AND SEED OF COTTON CAUSED BY THE PINK BOLLWORM.
M J Lukefahr D F Martin
J Econ Entom 56(5):710-713
Oct 1963 421 JB22
Cotton, Crop losses, Pectinophora gossypiella,
Pectinophora gossypiella (Saunders).

1170-67
RESISTANCE OF EXPERIMENTAL COTTON STRAIN I5I4 TO THE BOLLWORM AND COTTON FLEAHOPPER.
M J Lukefahr C B Cowan T R Perimmer L W Norla
J Econ Entom 59(2):393-395
Apr I966 42I J822
Cotton, Hallothis zea, Hallothis zea (Boddia), Insecticides, Parasitic insects, Plant hardiness, Psallus seriatus, Psallus serlatus (Reuter).

1171-67
ADDITIONAL NONCOTTON HOSTS OF THE BOLL WEEVIL AND COTTON LEAFWORM.
M J Lukefahr D F Martin
J Econ Entom 58(4):7B4
Aug I965 42I JB22
Alabama argillacea, Alabama argillacea (Hubnar), Anthonomus grandis, Anthonomus grandis Boheman, Plant hosts.

1172-67
THE YELLOW ROSE APHID, RHODOBIUM POROSUM (SANDERSON) (HOMOPTERA: APHIDIDAE), ON STRAWBERRY.
M E MacGillivray
Can Entom 95(B):B92-B96
Aug I963 42I CI6
Aphididae, Homoptera, Rhodobium porosum, Strawberries, Yellow rose aphid.

1173-67
BEHAVIOR AND CONTROL OF THE GRAPE MEALYBUG ON PEAR.
H F Madsen P H Wastigard
J Econ Entom 55(6):849-B50
Dec I962 42I J822
Insect behavior, Pears, Psaudococcus maritimus, Pseudococcus maritimus.

1174-67
THE RELATION OF THRIPS TO PANSY SPOT ON APPLES.
H F Madsen I D Jack
Can Entom 98(9):903-90B
Sep I966 42I CI6
Apples, Frankiniella occidentalis (Pargande), Pansay spot, Thrips.

1175-67
PLOWING FOR SWEETCLOVER WEEVIL CONTROL.
G R Manglitz C O Calkins
J Econ Entom 56(5):7I6-717
Oct I963 421 JB22
Cultural control (Insects), Plowing, Sitona cylindricollis, Sitona cylindricollis Fahraaus, Swaatclovar.

1176-67
DAMAGE TO SWEETCLOVER VARIETIES BY POTATO LEAFHOPPER.
G R Manglitz J L Jarvis
J Econ Entom 59(3):750-75I
Jun I966 42I JB22
Empoasca fabae, Empoasca fabaa, Sweatclovar.

1178-67
CARBAMATE-INDUCED SYSTEMIC REPELLENCY TO THE BOLL WEEVIL ON COTTON.
J W Matteson H M Taft
J Econ Entom 56(6):892-893
Dec 1963 421 JB22
Anthonomus grandis, Anthonomus grandis Bohaman, Carbamatas, Cotton, Insact rapellents.

1179-67
COMPARISON OF SOIL SURFACE TREATMENTS OF SOME FUMIGANTS AND SOIL INSECTICIDES FOR APPLE MAGGOT CONTROL.
C W Maxwell E C Parsons
J Econ Entom 55(6):I022-1023
Dac I962 421 J822
Apples, Fumigation, Insact control, Insecticides, Maggots, Soils.

1180-67
AN ARRESTANT AND FEEDING STIMULANT FOR THE BOLL WEEVIL IN WATER EXTRACTS OF COTTON-PLANT PARTS.
F G Maxwell J N Jenkins J C Kallar W L Parrott
J Econ Entom 56(4):449-454, TA8S.
Aug I963 421 J822
Anthonomus grandis, Anthonomus grandis Boheman, Cotton, Extracts, Feading stimulant.

1181-67
AUXIN CONTENT OF EXTRACTS OF CERTAIN TOLERANT AND SUSCEPTIBLE HOST PLANTS OF TOXOPTERA GRAMINUM, MACROSIPHUM PISI, AND THERIOAPHIS MACULATA AND RELATION TO HOST PLANT RESISTANCE.
F G Maxwell R H Painter
J Econ Entom 55(I):46-56, TABS.
Fab 1962 421 J822
Biological assay, Extracts, Macrosiphum pisi, Plant hormones, Plant hormones, Plant insact rasistance, Therioaphis maculata, Toxoptara graminum.

11B2-67
A BOLL WEEVIL REPELLENT FROM THE VOLATILE SUBSTANCE OF COTTON.
F G Maxwell J N Jenkins J C Kellar
J Econ Entom 56(6):B94-895
Dac 1963 421 JB22
Anthonomus grandis, Anthonomus grandis Boheman, Cotton, Insact repellents, Plant extracts.

1183-67
INFLUENCE OF THE GLANDLESS GENES ON FEEDING, OVIPOSITION, AND DEVELOPMENT OF THE BOLL WEEVIL IN THE LABORATORY.
F G Maxwell H M Lafever J N Jenkins
J Econ Entom 59(3):585-588
Jun I966 421 J822
Anthonomus grandis, Anthonomus grandis, Cotton, Davaiopmant, Faading, Glandiass genas, Laboratorias, Ovipositlon.

1184-67
BLISTER BEETLES ON GLANDLESS COTTON.
H G Maxwell H N Lafever J N Jenkins
J Econ Entom 5B(4):792-793
Aug I965 421 J822
Cotton, Epicauta, Maloidaa, Maloidae.

11B5-67
HONEY BEE VISITORS AND FRUIT SET OF CANTALOUPES.
S E Mcgragor M D Levin R E Foster
J Econ Entom 58(5):968-970
Oct I965 42I J822
Apis meilfera, Cantaloupas, Cucumis malo, Fruit satting.

1186-67
AMINO ACID CONTENT OF CORN SILKS IN RELATION TO RESISTANCE TO CORN EARWORM.
F S McCain W G Edan B W Arthur M C Cartar
J Econ Entom 56(6):902
Dac I963 42I JB22
Amino acids, Corn silks, Hallothis zaa, Hallothis zaa (Boddia), Piant past rasistanca.

11B7-67
FIELD TESTS WITH BACILLUS THURINGIENSIS BERLINER FOR CONTROL OF FOUR LEPIDOPTEROUS PESTS.
F L McEwan E H Glass A C Davis C M Spilttstoasser
J Invartebrata Path 2(2):I52-164, TABS.
I960 42I JB26
Argyrotaania valutinana (Walkar), Bacillus thuringiansis Barliner, Carpocapsa pomonella Linnaaus, Lepidoptera, Plaris rapae Linnaeus, Trichoplusia ni (Hubner).

11BB-67
CONTROL OF THREE IMPORTANT COTTON INSECTS IN THE LOWER RIO GRANDE VALLEY IN I960.
R L McGarr A J Chapman
J Econ Entom 56(6):902-903
Dac 1963 42I J822
Anthonomus grandis Bohaman, Cotton, Hallothis zaa (Boddia), Pactinophora gossypialla (Saundars), Rio Granda Vaiiay.

1189-67
STUDIES OF RESISTANCE OF COTTON STRAINS TO THE BOLL WEEVIL.
M E Markl J R Mayer
J Econ Entom 56(6):860-862, BI8L. 86I-862
Dec 1963 42I J822
Anthonomus grandis, Anthonomus grandis Bohaman, Cotton, Plant past rasistanca.

1190-67
ATTRACTIVENESS OF ISOLATED GROUPS OF COTTON PLANTS TO MIGRATING BOLL WEEVILS.
W J Mistric Jr E R Mitchall
J Econ Entom 59(11):39-4I
Feb I966 42I J822
Anthonomous grandis, Cotton.

1191-67
LOSSES CAUSED BY THE ANGOUMIS GRAIN MOTH IN DENT CORN.
S Moora III h B Patty W H Luckmann J H Byers
J Econ Entom 59(4):BB0-882, TA8S.
Aug 1966 421 J822

20 1192-67

Dent corn, Sitotroga cerealella.

1192-67
ARGENTINE ANT CONTROL ON CITRUS IN CALIFORNIA WITH GRANULAR FORMULATIONS OF CERTAIN CHLORINATED HYDROCARBONS.
C H Musgrove G E Carman
J Econ Entom 58(3):428-434, TABS.
Jun 1965 421 J822
California, Citrus, Iridomyrmex humilis, Iridomyrmex humilis (Mayr).

1193-67
TWO VARIETIES OF SESBANIA GRANDIFLORA AS FRUIT FLY HOSTS.
S Nakagawa T Yamada
J Econ Entom 58(4):796
Aug 1965 421 J822
Plant hosts, Sesbania grandiflora (L), Tephritidae.

1194-67
FACTORS AFFECTING RESISTANCE OF SELECTED ALFALFA CLONES TO THE POTATO LEAFHOPPER.
R C Newton D K Barnes
J Econ Entom 58(3):435-439
Jun 1965 421 JB22
Alfalfa, Clones, Empoasca fabae, Empoasca fabae (Harris), Plant pest resistance.

1195-67
LEAFHOPPERS ATTACKING ALFALFA IN THE SALT RIVER VALLEY OF ARIZONA.
M W Nielson W E Currie
J Econ Entom 55(5):803-804
Oct 1962 421 J822
Alfalfa, Arizona, Cicadellidae, Cicadellidae, Viruses.

1196-67
SCREENING ALFALFAS FOR RESISTANCE TO SOME COMMON INSECT PESTS IN ARIZONA.
M W Nielson M H Schonhorst
J Econ Entom 58(1):147-150
Feb 1965 421 JB22
Aceratagallia curvata Beamer, Aceratagallia curvata Oman, Acyrthosiphon pisum (Harris), Alfalfa, Arizona, Frankliniella spp, Lygus hesperus Knight, Spissistilus festinus (Say).

1197-67
WALKINSTICKS: AN UNUSUAL PEST ON SOUR CHERRY.
E R Oatman
J Econ Entom 58(3):587-588
Jun 1965 421 J822
Diapheromera femorata (Say), Phasmatidae, Sour cherries.

1198-67
PARASITIZATION OF CORN EARWORM EGGS ON SWEET CORN SILK IN SOUTHERN CALIFORNIA, WITH NOTES ON LARVAL INFESTATIONS AND PREDATORS.
E R Oatman
J Econ Entom 59(4):830-835
Aug 1966 421 JB22
California, Chrysopa sp., Coccinellids, Geocoris sp., Heliothis zea, Heliothis zea, Insect eggs, Larvae, Orius sp., Parasitism, Predaceous insects, Sweetcorn silk, Trichogramma pretiosum.

1199-67
PROGRESS ON INSECTICIDAL CONTROL OF APPLE INSECTS.
E R Oatman J L Libby
J Econ Entom 58(4):766-770, TABS.
Aug 1965 421 JB22
Apples, Argyrotaenia velutinana, Argyrotaenia velutinana (Walker), Conotrachelus nenuphar, Conotrachelus nenuphar (Herbst), Insecticides.

1200-67
RELATIONSHIP OF LEPIDOPTERA LIGHT-TRAP COLLECTIONS TO COTTON FIELD INFESTATIONS.
C R Parencia Jr C B Cowan Jr J W Davis
J Econ Entom 55(5):692-695
Oct 1962 421 J822
Cotton, Insect collecting equipment, Insecticides, Lepidoptera, Light traps.

1201-67
INSECTICIDE TESTS AGAINST THRIPS ON COTTON.
T R Pfrimmer M E Merkl
J Econ Entom 55(4):516-518
Aug 1962 421 JB22
Cotton, Insect control, Insecticides, Thrips.

1202-67
SOME EFFECTS OF DDT ON PULVINARIA VITIS (L.) (HOMOPTERA: COCCIDAE) INFESTING PEACH IN ONTARIO.
J H H Phillips W L Putman D C Herne
Can Entom 94(5):449-458
May 1962 421 CI6
Coccidae, DDT , Grapholitha molesta, Grapholitha molesta Busck, Homoptera, Peaches, Pulvinaria vitis (L.).

1203-67
WHEAT CROPS AND NATIVE PRAIRIE IN RELATION TO THE NUTRITIONAL ECOLOGY OF CAMNULA PELLUCIDA (SCUDDER) (ORTHOPTERA: ACRIDIDAE) IN SASKATEWAN.
R Pickford
Can Entom 95(7):764-770, BIBL. 769-770
Jul 1963 421 C16
Acrididae, Camnula pellucida, Orthoptera, Prairies, Saskatchewan, Wheat.

1204-67
NONINFECTIOUS CRINKLE LEAF ON SANTA ROSA PLUM.
T S Pine L C Cochran
Phytopathole 50(10):701-703
Oct 1960 464.B P56
Crinkle (plums), Plant genetics, Plums.

1205-67
BIOLOGY OF THE BANDED CUCUMBER BEETLE, DIABROTICA BALTEATA, IN LOUISIANA.
H N Pitre Jr E J Kantack
J Econ Entom 55(6):904-906, TABS.
Dec 1962 421 J822
Diabrotica balteata, Diabrotica balteata, Insect biology, Insect eggs, Larvae, Sweetpotatoes.

1206-67
INSECTICIDAL FIELD TRIALS FOR THE CONTROL OF POTATO APHIDS IN NEW BRUNSWICK, 1948-60.
D D Pond
J Econ Entom 55(3):306-308
Jun 1962 421 J822
Insecticides, Macrosiphum euphorbiae, Macrosiphum euphorbiae, Toxicology.

1207-67
ENDOSULFAN, OXYDEMETONMETHYL, AND ENDRIN IN CONTROL OF THE GREEN PEACH APHID AND SUPPRESSION OF LEAF ROLL IN POTATOES IN EASTERN WASHINGTON.
D M Powell
J Econ Entom 59(6):1354-1357
Dec 1966 421 JB22
Endosulfan, Leaf roll (potatoes), Myzus persicae, Oxydemetonmethyl, Washington.

1208-67
OCCURRENCE AND FOOD OF SOME COCCINELLIDS (COLEOPTERA) IN ONTARIO PEACH ORCHARDS.
W L Putman
Can Entom 96(9):1149-1155
Sep 1964 421 C16
Coccinellids, Coleoptera, Ontario.

1209-67
RELATIONS BETWEEN TYPHOLDROMUS CAUDIGLANS SCHUSTER (ACARINA: PHYTOSEIIDAE) AND PHYTOPHAGOUS MITES IN ONTARIO PEACH ORCHARDS.
W L Putman D H C Herne
Can Entom 96(7):925-943, BIBL. 942-943, TABS.
Jul 1964 421 C16
Acarina, Mites, Peaches, Phytoseiidae, Typhlodromus caudiglans Schuster.

1210-67
BACILLUS THURINGIENSIS AGAINST THE FALL CANKERWORM, ALSOPHILA POMETARIA.
R J Quinton C C Doane
J Econ Entom 55(4):567-568
Aug 1962 421 JB22
Alsophila pometaria, Alsophila pometaria (Harris), Bacillus thuringiensis.

1211-67
SOD WEBWORM CONTROL ON NEWLYSET TOBACCO.
R L Rabb F E Guthrie
J Econ Entom 55(4):561-562
Aug 1962 421 JB22
Crambus caliginosellus (Clemens), Sod webworm, Tobacco.

1212-67
PREDICTING THRIPS POPULATIONS ON SEEDLING COTTON.
S R Race
J Econ Entom 58(5):1013-1014
Oct 1965 421 JB22
Cotton, Frankliniella occidentalis, Seedlings.

1213-67
VARIETAL RESISTANCE TO INSECT ATTACK IN VARIOUS CRUCIFEROUS CROPS.
E B Radcliffe R K Chapman
J Econ Entom 59(1):120-125
Feb 1966 421 JB22
Cruciferae, Hylemya brassicae (Bouche),
Insect resistant plants, Pieris rapae (L.),
Plutella maculipennis (Curtis), Trlplusia ni (Hubner).

1214-67
PLANT RESISTANCE TO INSECT ATTACK IN COMMERCIAL CABBAGE VARIETIES.
E B Radcliffe R K Chapman
J Econ Entom 59(1):116-120
Feb 1966 421 J822
Brevicoryne brassicae (L.), Cabbage,
Hylemya brassicae (Bouche), Insect resistant plants,
Pieris rapae (L.), Trichoplusia ni (Hubner).

1215-67
THE CONTROL OF THE PEAR LEAF BLISTER MITE WITH ENDOSULFAN.
I A Rammer R O Arlas E A Kurtz
J Econ Entom 56(5):664-666, TABS.
Oct 1963 421 J822
Endosulfan, Eriophyes pyri, Eriophyes pyri (Pagenstecher),
Pears.

1216-67
EVALUATION OF THE EFFECTIVENESS OF CERTAIN INSECTICIDES FOR CONTROL OF THE VETCH BRUCHID.
N M Randolph
J Econ Entom 55(5):802
Oct 1962 421 J822
Bruchus brachialis, Bruchus brachialis Fahraeus,
Insect control, Insecticides.

1217-67
INCIDENCE OF ASTER YELLOWS IN LETTUCE AS AFFECTED BY PLACEMENT OF SYSTEMIC INSECTICIDES.
W A Rawlins D Gonzalez
J Econ Entom 59(1):226-227
Feb 1966 421 J822
Chlorogenus callistephi Holmes, Lettuce,
Systemic insecticides.

1218-67
EFFECT OF WATER SOLUBILITY AND SOIL MOISTURE UPON PLANT UPTAKE OF GRANULATED SYSTEMIC INSECTICIDES.
H T Reynolds R L Metcalf
J Econ Entom 55(1):2-5 TABS.
Feb 1962 421 JB22
Absorption (biological), Humidity, Insecticides, Solvents,
Water.

1219-67
EVALUATION OF SYSTEMIC INSECTICIDES FOR COTTON INSECT CONTROL.
R L Ridgway L J Gorzycki D A Lindquist
J Econ Entom 58(4):666-669, TABS.
Aug 1965 421 JB22
Cotton, Insect control, Insecticides.

1220-67
SESAME: A NEW HOST FOR TOBACCO BUDWORM AND BOLLWORM.
G W Rivers M V Meisch P J Hamman
J Econ Entom 58(5):1003-1004
Oct 1965 421 J822
Heliothis virescens, Heliothis zea, Insect hosts, Sesame,
Sesame.

1221-67
EFFECT OF COMMON VARIABLES IN RICE PRODUCTION ON RICE WATER WEEVIL CONTROL.
L H Rolston P Rouse
J Econ Entom 57(3):395-397
Jun 1964 421 J822
Lissorhoptrus oryzophilus, Lissorhoptrus oryzophilus, Rice,
Seed treatment.

1222-67
GERMINATION OF ALFALFA SEED TREATED WITH DRY AND LIQUID FORMULATIONS OF DI-SYSTON AND PHORATE.
Vincent D Roth
J Econ Entom 55(1):1-2
Feb 1962 421 J822
Alfalfa, Di-Syston, Phorate, Seed germination.

1223-67
FIELD INFESTATION OF CORN IN INDIANA BY THE ANGOUMOIS GRAIN MOTH AND A RICE WEEVIL.
M P Russell
J Econ Entom 55(5):814-815
Oct 1962 421 JB22
Corn, Indiana, Sitophilus oryzae,
Sitophilus zea-mais Motschulsky, Sitotroga cerealella,
Sitotroga cerealella (Oliver).

1224-67
FUMIGATION OF APPLES TO CONTROL THE APPLE MAGGOT, RHAGOLETIS POMONELLA.
K H Sanford
J Econ Entom 55(5):724-727, TABS.
Oct 1962 421 JB22
Apples, Fumigation, Rhagoletis pomonella,
Rhagoletis pomonella (Walsh).

1225-67
BULK FUMIGATION OF APPLES WITH ETHYLENE DIBROMIDE UNDER PLASTIC TARPAULINS FOR APPLE MAGGOT.
K H Sanford
J Econ Entom 55(5):659-661, TABS.
Oct 1962 421 JB22
Apples, Ethylene dibromide, Fumigation,
Rhagoletis pomonella, Rhagoletis pomonella (Walsh).

1226-67
THE REDUCTION OF INSECT-CAUSED APICAL SEEDINESS IN STRAWBERRIES.
G A Schaefers
J Econ Entom 59(3):698-706
Jun 1966 421 J822
Apical seediness, Azinphosmethyl, Azodrin, Carbophenothion,
Dimethoate, Endosulfan, Ligus lineolaris, Methyl trithion,
Mevinphos, NAD , Parathion, Strawberries, Trichlorfon.

1227-67
CONTROL TESTS AGAINST THE TWO-SPOTTED SPIDER MITE, TETRANYCHUS TELARIUS (L.), ON STRAWBERRIES.
G A Schaefers
J Econ Entom 58(6):1089-1094, TABS.
Dec 1965 421 J822
Strawberries, Tetranychus telarius (L).

1228-67
LARVAL GROWTH AS A METHOD OF SCREENING TRITICUM SP. FOR RESISTANCE TO THE CEREAL LEAF BEETLE.
J A Schillinger
J Econ Entom 59(5):1163-1166
Oct 1966 421 J822
Cereal leaf beetle, Insect resistant plants, Larvae,
Oulema melanopus (L.), Triticum sp..

1229-67
TESTS OF SYSTEMICS FOR CONTROL OF BIRCH LEAF MINER.
J C Schread
J Econ Entom 55(4):562-563
Aug 1962 421 J822
Fenusa pusilla, Fenusa pusilla (Lepletier), Insect control,
Systemic insecticides, Trees.

1230-67
THE INFLUENCE OF FERTILIZERS ON SUGAR BEETS WHICH RECEIVED INSECTICIDE-FUNGICIDE SEED TREATMENTS.
J T Schulz
J Econ Entom 55(1):44-46, TABS.
Feb 1962 421 JB22
Fertilizers, Fungicides, Insecticides, Seed treatment,
Sugar beets.

1231-67
INSECTICIDE AND MICROBIAL DUSTS AND APPLICATION INTERVALS FOR CONTROL OF LETTUCE INSECTS.
M F Schuster
J Econ Entom 59(2):469-471, TABS.
Apr 1966 421 J822
Aphididae, Dusting, Insect control, Insecticides, Lettuce,
Microorganisms.

1232-67
THE ROLE OF NEW INSECTICIDES FOR CONTROL OF RICE STEM BORER IN ORISSA.
G C Sengupta
J Econ Entom 56(6):802-804, TABS.
Dec 1963 421 JB22
India, Insecticides, Rice stem borer, Schoenobius incertulas Walker.

1233-67
THE RELATIONSHIP BETWEEN SPROUT INHIBITORS AND OVERWINTERING OF APHIDS ON OUTDOOR PILES OF CULL POTATOES.
W A Shands G W Simpson
J Econ Entom 56(6):899-900
Dec 1963 421 JB22
Apididae, Hibernation, Plant growth inhibitors, Potatoes.

1234-67
DURATION OF CONTROL OF THE STRAWBERRY APHID BY SEVERAL CHEMICALS.
C H Shanks Jr
J Econ Entom 56(4):535-536
Aug 1963 421 JB22
Chaetosiphon fragaefolii, Insecticides, Pentatrichopus fragaefolii (Cockerell), Strawberries.

1235-67
HOSTS PLANTS OF THE PINK BOLLWORM.
I Shiller L W Noble L C Fife
J Econ Entom 55(1):67-70
Feb 1962 421 JB22
Cotton, Okra, Okra, Pectinophora gossypiella.

1236-67
BIOLOGICAL CONTROL OF THE COCONUT SCALE, ASPIDIOTUS DESTRUCTOR SIGN., IN PRINCIPE, PORTUGESE WEST AFRICA.
F J Simmonds
Bull Entomol R 51(2):223-237
Jul 1960 421 BB7
Aspidiotus destructor Sign., Biological control (insects), Coconuts, Cryptognatha nodiceps, PortugueseWestAfrica, Principe.

1237-67
THE SORPTION AND RETENTION OF ETHYLENE DIBROMIDE BY FUMIGATED CITRUS AND AVOCADO FRUITS.
W B Sinclair D E Lindgren R Forbes
J Econ Entom 55(2):236-240
Apr 1962 421 JB22
Adsorption, Avocados, Citrus, Ethylene dibromide, Fumigation.

1238-67
APPLICATION OF SYSTEMIC INSECTICIDES AS SEED TREATMENT TO PROTECT WHEAT PLANTS AGAINST GRASSHOPPERS AND WHEAT STEM SAWFLY.
F E Skoog L E Wallace
J Econ Entom 57(2):199-205, TABS.
Feb 1964 421 JB22
Cephus cinctus, Cephus cinctus, Grasshoppers, Insecticide application, Systemic insecticides, Wheat.

1239-67
CONTROL OF THE PEACH TREE BORER ON YOUNG PEACH TREES BY A TREATMENT BEFORE PLANTING.
E H Smith
J Econ Entom 55(3):294-298, PL.
Jun 1962 421 JB22
Insecticides, Peaches, Sanninoidea exitiosa, Sanninoidea exitiosa, Tree planting.

1240-67
PEACH TREE BORER EXPERIMENTS IN PEACH ORCHARDS.
O I Snapp
J Econ Entom 55(3):418-419
Jun 1962 421 JB22
Peaches, Sanninoidea exitiosa, Sanninoidea exitiosa, Spraying.

1241-67
SECONDARY BAGWORM INJURY.
L J Stannard Jr
J Econ Entom 57(1):176, PL.
Feb 1964 421 JB22
Girdling (insects), Thyridopteryx ephemeraeformis, Thyridopteryx ephemeraeformis.

1242-67
A FIELD TEST OF LINDANE FOR PREVENTION AND CONTROL OF ATTACK BY IPS CONFUSUS (LECONTE) (COLEOPTERA:SCOLYTIDE) IN SLASH.
R W Stark J H Borden
J Econ Entom 58(5):994-996
Oct 1965 421 JB22
Field test, Ips confusus, Lindane, Pinus.

1243-67
DAMAGE TO CORN BY THE PINK SCAVENGER CATERPILLAR AND ITS RELATIONSHIP TO CORN EARWORM AND RICE WEEVIL DAMAGE.
K J Starks H C Cox W W McMillian R L Burton
J Econ Entom 59(4):931-934, TABS.
Aug 1966 421 JB22
Corn, Heliothis zea, Heliothis zea, Sathrobrota rileyi, Sathrobrota rileyi, Sitophilus oryzae, Sitophilus oryzae.

1244-67
CONTROL OF PLANT BUGS AND OTHER INSECTS ON KENTUCKY BLUEGRASS GROWN FOR SEED.
K J. Starks R Thurston
J Econ Entom 55(6):993-997, TABS.
Dec 1962 421 JB22
Insects, Miridae, Miridae, Poa, Poa, Seeds.

1245-67
EXPERIMENT ON ALFALFA INSECT CONTROL IN MARYLAND.
A L Steinhauer C C Blickenstaff V E Adler
J Econ Entom 55(5):718-722, TABS.
Oct 1962 421 JB22
Alfalfa, Insect control, Insecticides.

1246-67
EFFECT OF INFESTATION BY THE RICE STINK BUG, OEBALUS PUGNAX ON YIELD AND QUALITY IN RICE.
M C Swanson L D Newsom
J Econ Entom 55(6):877-879
Dec 1962 421 JB22
Crop yields, Oebalus pugnax, Rice.

1247-67
INSECTICIDES FOR TOBACCO FLEA BEETLE CONTROL ON CIGAR-WRAPPER TOBACCO.
W B Tappan
J Econ Entom 58(4):730-732
Aug 1965 421 JB22
Cigar-wrapper tobacco, Epitrix hirtipennis, Epitrix hirtipennis Melsheimer), Insecticides.

1248-67
ASTER YELLOWS CONTROL IN HEAD LETTUCE AND CARROTS IN PRINCE EDWARD ISLAND.
L S Thompson
J Econ Entom 58(1):135-137
Feb 1965 421 JB22
Aster yellows (carrots), Carrots, Lettuce, Macrosteles fascifrons (Stal), Prince Edward Island, Viruses, Yellows (lettuce).

1249-67
EFFECT OF INSECTICIDES ON THE GREEN PEACH APHID, MYZUS PERSICAE (SULZER), INFESTING BURLEY TOBACCO.
R Thurston
J Econ Entom 58(6):1127-1130, TABS.
Dec 1965 421 JB22
Air-cured tobacco, Insecticides, Myzus persicae, Myzus persicae (Sulzer).

1250-67
THE SAWFLY ATOMACERA DECEPTA, A PEST OF HIBISCUS.
H H Tippins
J Econ Entom 58(1):161
Feb 1965 421 JB22
Argidae, Hibiscus, Plant pest resistance.

1251-67
THE RESPONSE OF CRANBERRY FRUITWORM TO BLACK LIGHT.
W E Tomlinson Jr
J Econ Entom 55(4):573
Aug 1962 421 JB22
Acrobasis vaccinii, Light traps.

1252-67
CONTROL OF LICHNANTHE VULPINA IN CRANBERRY BOGS.
W E Tomlinson Jr
J Econ Entom 55(4):572-573
Aug 1962 421 JB22
Cranberry bogs, Larvae, Lichnanthe vulpina (Hentz).

1253-67
CONTROLLING THE CORN LEAF APHID, RHOPALOSIPHUM MAIDIS, IN GREENHOUSES.
C A Triplehorn
J Econ Entom 55(4):570
Aug 1962 421 J822
Greenhouses, Rhopalosiphum maidis, Rhopalosiphum maidis (Fitch).

1254-67
APHIDECTA O8LITERATA (COLEOPTERA: COCCINELLIDAE), AN INTRODUCED PREDATOR OF THE 8ALSAM WOOLLY APHID, CHERMES PICEAE (HOMOPTERA: CHERMIDAE), ESTA8LISHED IN NORTH CAROLINA.
J Econ Entom 59(3):506-508
Jun 1966 421 J822
Aphidecta obliterata, Chermes piceae, Chermes piceae, Chermidae, Coccinellidae, Coleoptera, Homoptera, Predaceous insects.

1255-67
EFFECTS OF THE 8OLL WEEVIL AND 8OLLWORM ON COTTON QUALITY.
J K Walker R L Hanna
J Econ Entom 59(2):265-267, TA8S
Apr 1966 421 J822
Anthonomus grandis, Anthonomus grandis 8oheman, Cotton, Crop yields, Heliothis zea, Heliothis zea (8oddie).

1256-67
FIELD-PLOT TESTS OF CHEMICALS FOR WHEAT STEM SAWFLY CONTROL.
L W Wallace
J Econ Entom 55(6):908-912
Dec 1962 421 J822
Cephus cinctus, Cephus cinctus, Chemicals, Insect control, Wheat.

1257-67
HOST PLANT PREFERENCE OF THE SIX-SPOTTED LEAFHOPPER.
R L Wallis
J Econ Entom 55(6):998-999
Dec 1962 421 J822
Host plants, Macrosteles fascifrons, Macrosteles fascifrons, Ornamental plants, Vegetables.

1258-67
A FIELD TEST WITH INSECTICIDES TO CONTROL THE SCALE FIORINIA EXTERNA ON CANADIAN HEMLOCK.
W E Wallner
J Econ Entom 55(5):798-799
Oct 1962 421 J822
Fiorinia externa (Ferris), Insecticides, Scales (insects), Tsuga.

1259-67
NORTHERN CORN ROOTWORM RESISTANCE IN SWEET CORN.
E V Walter
J Econ Entom 58(6):1076-1078
Dec 1965 421 J822
Diabrotica longicornis, Diabrotica longicornis (Say), Plant hardiness, Sweetcorn.

1260-67
INFLUENCE OF THRIPS ON COTTON YIELDS IN ALA8AMA.
T F Watson
J Econ Entom 58(6):1118-1122, TA8S.
Dec 1965 421 J822
Alabama, Cotton, Frankliniella fusca, Frankliniella fusca (Hinds), Frankliniella tritici, Frankliniella tritici (Fitch), Thrips tabaci, Thrips tabaci.

1261-67
COMPARISON OF INSECTICIDE APPLICATION SCHEDULES FOR CONTROL OF COTTON INSECTS.
T F Watson M C Sconyers
J Econ Entom 58(6):1124-1127, TA8S.
Dec 1965 421 J822
Anthonomus grandis, Anthonomus grandis 8oheman, Cotton, Heliothis virescens, Heliothis zea, Heliothis zea (8oddie), Insecticide application.

1262-67
SEASONAL DISTRI8UTION OF DROSOPHILID FLIES IN 8ELTSVILLE, MARYLAND, TOMATO FIELDS.
H E Wave
J Econ Entom 55(3):409-411
Jun 1962 421 J822
Diptera, Diptera, Drosophilidae, Insect control, Tomatoes.

1263-67
COMPARATIVE SUSCEPTI8ILITY OF LONG- AND SHORT-STAPLE COTTON VARIETIES TO 8OLLWORM INJURY IN ARIZONA.
G P Wene L W Sheets
J Econ Entom 59(6):538-539
Dec 1966 421 J822
Arizona, Cotton, Heliothis zea, Heliothis zea.

1264-67
WHITE SPRUCE SEED LOSS CAUSED 8Y INSECTS IN INTERIOR ALASKA.
R A Werner
Can Entom 96(11):1462-1464
Nov 1964 421 C16
Alaska, Picea glauca.

1265-67
PSYLLA PYRICOLA FOERSTER SUPPRESSES PEAR TREE ROOT DEVELOPMENT.
W H A Wilde D L McIntosh
Can Entom 96(8):1083-1087
Aug 1964 421 C16
Psylla pyricola Foerster.

1266-67
THE SPINED STINK 8UG: CAUSE OF COTTONY SPOT IN PEAR IN 8RITISH COLUM8IA.
J M Wilks
Can Entom 96(9):1198-1201
Sep 1964 421 C16
8ritish Columbia, Cottony spot (pears), Euschistus variolarius (8eauv.).

1267-67
LOW-VOLUME CONCENTRATE SPRAYS APPLIED 8Y AIRCRAFT FOR CONTROL OF THE CEREAL LEAF 8EETLE.
M Wilson R F Ruppel R E Treece
J Econ Entom 58(1):11-14
Feb 1965 421 J822
Aircraft disinfestation, Cereal leaf beetle, Insect control, Oulema melanopa (L), Spraying.

1268-67
DETECTING CORN SEEDLING DIFFERENCES IN THE GREENHOUSE 8Y VISUAL CLASSIFICATION OF DAMAGE 8Y THE FALL ARMYWORM.
8 R Wiseman R H Painter C E Wassom
J Econ Entom 59(5):1211-1214
Oct 1966 421 J822
Corn, Greenhouse culture, Seedlings, Spodoptera frugiperda, Spodoptera frugiperda (J. E. Smith), Visual classification.

1269-67
TOMATO YIELDS AND LEAF MINER INFESTATIONS AND A SEQUENTIAL SAMPLING PLAN FOR DETERMINING NEED FOR CONTROL TREATMENTS.
D A Wolfenbarger D O Wolfenbarger
J Econ Entom 59(2):279-283, TA8S.
Apr 1966 421 J822
Chemical control (insects), Crop yields, Leaf miners, Liriomyza sp., Tomatoes.

1270-67
TOMATO, LYCOPERSICON ESCULENTUM, AND LYCOPERSICON SPECIES AND GENETIC MARKERS IN RELATION TO MITE, TETRANYCHUS MARIANAE, INFESTATIONS.
D A Wolfenbarger
J Econ Entom 58(5):891-893
Oct 1965 421 J822
Lycopersicon peruvianum, Mites, Tetranychus marianae, Tomatoes, Tomatoes.

1271-67
VARIATION IN SUSCEPTI8ILITY OF SOY8EAN PU8ESCENT TYPES, 8ROAD 8EAN, AND RUNNER 8EAN VARIETIES AND PLANT INTRODUCTIONS TO THE POTATO LEAFHOPPER.
D A Wolfenbarger J P Sleesman
J Econ Entom 56(6):895-897
Dec 1963 421 J822
8roadbeans, Empoasca fabae, Empoasca fabae (Harris), Plant pest resistance, Runner beans, Soybeans.

1272-67
THE 8ANDED CUCUM8ER 8EETLE AND ITS CONTROL.
D O Wolfenbarger
J Econ Entom 56(6):770-773, TA8S.
Dec 1963 421 J822
Cucumbers, Diabrotica balteata, Diabrotica balteata (LeConte).

20 1273-67

1273-67
TOLERANCE OF AVOCADOS TO ETHYLENE CHLOROBROMIDE AND ETHYLENE DIBROMIDE DIPPING AND FUMIGATION.
D O Wolfenbarger
J Econ Entom 55(4):556-557
Aug 1962 421 J822
Avocados, Bromochloroethane, Ethylene dibromide, Fumigation, Insect control.

1274-67
VARIATIONS IN LEAF MINER AND FLEA BEETLE INJURIES IN TOMATO VARIETIES.
Da Wolfenbarger
J Econ Entom 59(1):65-68
Feb 1966 421 JB22
Chrysomelidae, Epitrix hertipennis (Melsheimer), Injuries, Tomatoes.

1275-67
EFFECT OF FOLIAGE INFESTATION OF THE ENGLISH GRAIN APHID ON YIELD OF TRIUMPH WHEAT.
E A Wood Jr
J Econ Entom 5B(4):778-779
Aug 1965 421 J822
Crop yields, Macrosiphum avenae, Macrosiphum avenae (F), Schizaphis graminum, Schizaphis graminum (Rondani), Wheat.

1276-67
EXPERIMENTS ON THE INTERRELATIONSHIP BETWEEN OLEORESIN EXUDATION PRESSURE IN PINUS PONDEROSA AND ATTACK BY IPS CONFUSUS (LEC.) (COLEOPTERA: SCOLYTIDAE).
D L Wood
Can Entom 94(5):473-477
May 1962 421 C16
Coleoptera, Ips confusus, Ips confusus (LeConte), Oleoresins, Pinus ponderosa, Scolytidae.

1277-67
THE DAMAGE CONTROL OF CLIMBING CUTWORMS IN COMMERCIAL FIELDS OF LOWBUSH BLUEBERRY.
G W Wood
J Econ Entom 57(3):3B4-3B5
Jun 1964 421 J822
Blueberries, Insect behavior, Noctuidae, Noctuidae.

Nematodes

127B-67
USE OF HERBICIDES TO BREAK THE LIFE CYCLE OF THE BENTGRASS NEMATODE, ANGUINA AGROSTIS (STEINBUCK 1799) FILIPJEV 1936.
W J Apt H M Austenson W D Courtney
Plant Dis R 44(7):524-526
15 Jul 1960 1.9 P69P
Agrostis, Agrostis, Anguina agrostis, Bentgrass nematode, Herbicides.

1279-67
GROWTH STUDIES OF A CATENARIA SP. INFECTING NEMATODES.
W Birchfield
Phytopatholo 50(9):629
Sep 1960 464.8 P56
Catenaria, Plant nematodes, Plant physiology.

1280-67
RESISTANCE TO THE ROOT-KNOT NEMATODE, MELOIDOGYNE INCOGNITA ACRITA, IN UPLAND COTTON SEEDLINGS.
B B Brodie L A Brinkerhoff F B Struble
Phytopatholo 50(9):673-677, TABS
Sep 1960 464.B P56
Cotton, Meloidogyne incognita acrita, Root knot (cotton), Seedlings.

12B1-67
POPULATION DEVELOPMENT OF MELOIDOGYNE ARENARIA IN RED CLOVER.
R A Chapman
Phytopatholo 50(9):631
Sep 1960 464.B P56
Meloidogyne arenaria, Population, Red clover.

12B2-67
NEMIC PARASITES OF COFFEE IN GUATEMALA.
B G Chitwood C Berger
Phytopatholo 50(9):631
Sep 1960 464.8 P56
Coffee, Guatemala, Parasitism, Plant nematodes.

12B3-67
MELOIDOGYNE FROM TAIWAN AND NEW DELHI.
B G Chitwood M Toung
Phytopatholo 50(9):631-632
Sep 1960 464.8 P56
Citrus reticulata austera, Meloidogyne, New Delhi, Taiwan.

12B4-67
RECENT DEVELOPMENTS IN STING NEMATODE CONTROL ON PEANUTS.
W E Cooper J N Sasser
Phytopatholo 50(9):632
Sep 1960 464.B P56
Peanuts.

12B5-67
AN ASSAY FOR THE DETECTION OF NEMATODE REPELLENTS.
D Davis J E Deak
Plant Dis R 44(8):622-624
15 Aug 1960 1.9 P69P
Assay, Nematode repellents.

12B6-67
POPULATION VARIATION OF PRATYLENCHUS PENETRANS AND OTHER NEMATODES ASSOCIATED WITH ROOTS.
A A Di Edwardo
Phytopatholo 50(9):633
Sep 1960 464.8 P56
Plant nematodes, Population statistics, Pratylenchus penetrans, Roots.

12B7-67
RELATIONSHIPS OF POPULATION INCREASE OF PRATYLENCHUS PENETRANS TO VEGETATIVE GROWTH OF WANDO PEAS.
J S Dolliver D G Clark W F Mai
Phytopatholo 50(4):239
Apr 1960 464.B P56
Pratylenchus penetrans, Wando peas.

128B-67
RECOVERY OF NEMATODES FROM INFECTED ROOTS BY ENZYME PREPARATIONS.
V H Dropkin W L Smith Jr
Phytopatholo 50(9):634
Sep 1960 464.8 P56
Enzymes, Erwinia carotovora, Plant nematodes, Roots.

12B9-67
EVALUATION OF CROPS ROTATION AND SOIL FUMIGATION FOR CONTROLLING THE SOYBEAN CYST NEMATODE.
J M Epps
Phytopatholo 50(9):635
Sep 1960 464.B P56
Crop rotation, Heterodera glycines, Soil fumigation, Soybeans.

1290-67
MOVEMENT OF RADOPHOLUS SIMILIS INTO ROUGH LEMON FEEDER ROOTS AND IN SOIL, AND ITS RELATION TO FUSARIUM IN THE ROOTS.
J Feldmesser R C Cetas G R Grimm R V Rebois R Whidden
Phytopatholo 50(9):635
Sep 1960 464.B P56
Fusarium, Lemons, Radopholus similis, Roots.

1291-67
EFFECT OF STORAGE TEMPERATURES ON SURVIVAL OF PLANT PARASITIC NEMATODES IN SOIL.
J M Ferris
Phytopatholo 50(9):635
Sep 1960 464.B P56
Parasitism, Plant nematodes, Soil sampling, Storage, Temperature.

1292-67
CITRUS VARIETIES, HYBRIDS, SPECIES AND RELATIVES EVALUATED FOR RESISTANCE TO THE BURROWING NEMATODE, RADOPHUS SIMILIS.
H W Ford W A Feder P C Hutchins
Plant Dis R 44(6):405
15 Jun 1960 1.9 P69P
Citrus, Hybrids, Nematodes, Plant nematode resistance, Radopholus similis, Radopholus similis.

1293-67
COMPARISON OF BACILLUS THURINGIENSIS BERLINER VAR. THURINGIENSIS AND CHEMICAL INSECTICIDES FOR CONTROL OF THE ALFALFA CATERPILLAR.
I M Hall V M Stern
J Econ Entom 55(6):862-865
Dec I962 421 JB22
Bacillus thuringiensis Berliner, Chemicals, Colias eurytheme, Collas eurytheme, Insecticides.

1294-67
THE REACTIONS OF THREE GOLDEN NEMATODE POPULATIONS TO RESISTANT AND SUSCEPTIBLE POTATO SELECTIONS.
M B Harrison
Phytopatholo 50(9):63B
Sep 1960 464.8 P56
Heterodera rostochiensis, Population, Potatoes.

1295-67
MECHANISM OF SWARMING IN TYLENCHLORHYNCHUS SPECIES (NEMATODA, TYLENCHIDA).
J P Hollis
Phytopatholo 50(9):639
Sep 1960 464.B P56
Nematoda, Swarming, Tylenchida, Tylenchorhynchus.

1296-67
GREENHOUSE PATHOGENICITY TRIALS WITH NEMATODE-INFESTED SOIL.
J P Hollis W J Martin
Phytopatholo 50(9):639-640
Sep I963 464.8 P56
Greenhouse culture, Nematodes, Soil microorganisms, Trichodorus.

1297-67
CHEMICAL CONTROL OF SLUGS AFFECTING VEGETABLES AND STRAWBERRIES IN THEPACIFIC NORTHWEST.
A J Howitt S G Cole
J Econ Entom 55(3):320-325, TABS.
Jun 1962 421 JB22
Chemicals, Plant pest control, Slugs, Strawberries, Vegetables.

1298-67
EFFECTS OF CERTAIN PHOSPHORODITHIOATE COMPOUNDS UPON POPULATIONS OF PRATYLENCHUS PENETRANS.
H J Jensen D E Konicek
Phytopatholo 50(9):640
Sep I960 464.B P56
Lilium longiflorum, Phosphorodithioate compounds, Population, Pratylenchus penetrans.

1299-67
HYDROLYTIC AND RESPIRATORY ENZYMES OF SPECIES OF DITYLENCHUS AND PRATYLENCHUS.
L R Krusberg
Phytopatholo 50(I):9-2I
Jan I960 464.8 P56
Ditylenchus dipsaci, Ditylenchus triformis, Enzymes, Pratylenchus zeae.

1300-67
CULTURING, HISTOPATHOLOGY, AND BIOCHEMISTRY OF DITYLENCHUS DIPSACI AND APHELENCHOIDES RITZEMA-BOSI ON ALFALFA TISSUES.
L R Krusberg
Phytopatholo 50(9):643
Sep I960 464.8 P56
Alfalfa, Aphelencholdes ritzema-bosi, Culture media, Ditylenchus dipsaci, Plant biochemistry, Plant diseases.

1301-67
NEMATODES ASSOCIATED WITH RED CLOVER IN ITS SECOND GROWTH YEAR.
N E Lau J P Reed
Plant Dis R 44(6):402
I5 Jun I960 I.9 P69P
Nematodes, Parasitic nematodes, Red clover.

1302-67
EXTRACTION OF DITYLENCHUS DIPSACI FROM ORGANIC SOIL AND DRIED ONION SCALES.
G D Lewis
Phytopatholo 50(4):240
Apr I960 464.B P56
Ditylenchus dipsaci, Onions.

1303-67
GROWTH OF APPLE SEEDLINGS IN RELATION TO SOIL TEMPERATURE AND INOCULATION WITH PRATYLENCHUS PENETRANS.
W F Mai
Phytopatholo 50(3):237-238
Mar 1960 464.B P56
Apples, Immunization, Pratylenchus penetrans, Seedlings, Soil temperature.

1304-67
THE USE OF NEMATODE-TRAPPING FUNGI TO CONTROL ROOT-KNOT NEMATODES.
R Mankau
Phytopatholo 50(9):645
Sep 1960 464.B P56
Fungi, Root-knot nematodes.

1305-67
EFFECTS OF SOIL FUMIGANTS ON THE OCCURRENCE OF NEMATODES IN FIELD BINS.
E B Minton E J Cairns A L Smith
Plant Dis R 44(7):479-483
I5 Jul 1960 I.9 P69P
Field bins, Nematodes, Plant nematodes, Soil fumigation.

1306-67
NEMATODES ASSOCIATED WITH ROOTLETS OF WESTERN WHITE PINE IN NORTHERN IDAHO.
W R Nickle
Plant Dis R 44(7):470-47I
15 Jul 1960 1.9 P69P
Nematodes, Parasitic nematodes, Pinus monticola, Pinus monticola, Roots.

1307-67
PRELIMINARY STUDIES WITH DBCP COTTON SEED TREATMENT FOR CONTROLLING THE ROOT-KNOT NEMATODE.
J H O Bannon H W Reynolds
Plant Dis R 44(7):4B4-4B7
I5 Jul 1960 1.9 P69P
Cotton, DBCP , Plant nematodes, Root knot nematode, Seed treatment.

130B-67
PHYSIOLOGICAL AND BIOCHEMICAL STUDIES ON NEMATODE GALLS.
R G Owens H M Novotny
Phytopatholo 50(9):650
Sep 1960 464.8 P56
Meloidogyne incognita incognita, Nematodes, Plant biochemistry, Plant galls, Plant physiology.

1309-67
REACTION OF SIXTEEN VARIETIES OF ALFALFA TO TWO SPECIES OF ROOT-KNOT NEMATODES.
H W Reynolds J H O Bannon
Plant Dis R 44(6):441
I5 Jun I960 1.9 P69P
Alfalfa, Plant nematodes.

1310-67
HETERODERA TRIFOLII, A FOLIAGE PATHOGEN OF WHITE CLOVER.
J P Ross
Phytopatholo 50(II):866-867
Nov 1960 464.8 P56
Heterodera trifolii, White clover.

1311-67
THE EFFECT OF SOIL TEMPERATURES ON DEVELOPMENT OF HETERODERA GLYCINES IN SOYBEANS.
J P Ross
Phytopatholo 50(9):652
Sep 1960 464.B P56
Heterodera glycines, Soil temperature, Soybeans.

1312-67
CHEMICAL CONTROL OF PLANT-PARASITIC NEMATODES IN PLANT ROOTS.
S A Sher
Phytopatholo 50(9):654
Sep I960 464.B P56
Chemical control (nematodes), Parasitism, Plant nematodes, Roots.

1313-67
OIKETICUS KIRBYI (LEPIDOPTERA: PSYCHIDAE) A PEST OF BANANAS IN COSTA RICA.
C S Stephens
J Econ Entom 55(3):3B1-3B6, TABS.
Jun I962 421 JB22
Bananas, Larvae, Lepidoptera: Psychidae, Oiketicus kirby, Thyridopteryx ephemeraeformis.

20 1314-67

1314-67
OXYGEN TOLERANCES OF FOUR PLANT-PARASITIC NEMATODES.
L H Stoizy S D Van Gundy J Letey Jr
Phytopatholo 50(9):6S6
Sep 1960 464.B P56
Oxygen, Parasitism, Plant nematodes.

1315-67
A MODIFICATION OF THE 8UCHNER FUNNEL METHOD FOR TRANSFERRING AND CONCENTRATING NEMATODES.
L W Storm N S Storm D A Dahlgren
Plant Dis R 44(6):4S0
I5 Jun 1960 1.9 P69P
Buchner funnel method, Larvae, Nematode extraction, Nematodes.

1316-67
EFFECT OF DELAYED SPRAYING ON CANKERWORM CONTROL.
H E Thompson
J Econ Entom SS(4):S5B-5S9
Aug 1962 421 J822
Alsophila pometaria, Paleacrita vernata, Pest control, Spraying, Trees.

1317-67
THE EFFECT OF HOT WATER AT DIFFERENT TEMPERATURES ON LARVAE OF VARIOUS SPECIES OF MELOIDOGYNE.
J T Walker
Phytopatholo S0(9):658
Sep I960 464.8 PS6
Hot water treatment (nematodes), Larvae, Meloidogyne, Temperature.

I318-67
DAGGER NEMATODES ASSOCIATED WITH FORAGE CROPS IN NEW YORK.
C H Ward
Phytopatholo S0(9):6S8
Sep 1960 464.8 PS6
Crops, Forage plants, New York, Xiphinema americanum.

1319-67
NEMATODE CONTROL ON ROSES WITH ROOT DIP TREATMENTS.
C E Williamson M C Harrison
Phytopatholo S0(9):659
Sep 1960 464.B PS6
Plant nematodes, Root dip treatment, Rosa.

Weeds

1320-67
SOME CONCEPTS ON THE ECOLOGICAL BASIS OF BIOLOGICAL CONTROL OF WEEDS.
C 8 Huffaker
Can Entom 94(S):S07-5I4, BI8L. SI4
May I964 421 C16
Biological control (weeds), Plant ecology, Weed control.

Other

1321-67
A LA8ORATORY METHOD FOR EVALUATING CHEMICALS AS BIRD REPELLENTS.
R I Starr J F 8esser R 8 8runton
J Agr Food Ch I2(4):342-344
Jul 1964 38I J8223
Bird pests, 8ird repellents, Red-winged blackbird.

30 LIVESTOCK PROTECTION

Diseases

1322-67
CONTROL OF MINK MYIASIS CAUSED 8Y THE LARVAE OF WOHLFAHRTIA VIGIL.
J L Eschle G R DeFoliart
J Econ Entom S8(3):S29-S31
Jun I96S 42I J822
Diptera, Insect vectors, Minks, Myiasis, Sarcophagidae, Wohlfahrtia vigil (Walker).

1323-67
SUPPLEMENTATION OF CHICK DIETS WITH VITAMIN E TO IMPROVE MEAT QUALITY.
8 Laksesvela
J Sci Food A I1(3):I28-133, TA8S.
Mar 1960 382 SOI2
Chicks, Diet, Poultry meat.

1324-67
STUDY OF SOME MINERAL MIXTURES DESIGNED FOR DAIRY COWS.
R C Noble 8 Thomas
J Sci Food A II(9):4B5-497
Sep 1960 382 SOI2
Dairy cattle, Minerals.

1325-67
BONE-TAINT IN BEEF.- II. BACTERIA IN ISCHIATIC LYMPH NODES.
P M Nottingham
J Sci Food A 11(8):436-44I, TA8S.
Aug I960 382 SOI2
Bacteria, 8eef, 8one-taint, 8ones, Lymph nodes.

1326-67
CONTROL OF THE HACKBERRY-NIPPLE GALL MAKER WITH NEW ORGANIC INSECTICIDES.
H E Thompson
J Econ Entom SS(4):SS5-SS6, TABS.
Aug I962 42I J822
Insecticides, Organic compounds, Pachypsylla celtidismamma, Pachypsylla celtidismamma, Pest control.

Arthropods

1327-67
LARVICIDES FOR THE CONTROL OF HOUSE FLIES IN POULTRY HOUSES.
U E 8rady Jr G C LaBrecque
J Econ Entom S9(6) IS2I
Dec 1966 42I J822
Larvicides, Musca domestica, Musca domestica, Poultry manure.

1328-67
EFFECTS OF CERTAIN SYSTEMIC INSECTICIDES IN BACKRUBBERS FOR CATTLE GRU8 CONTROL.
J R 8rethour T L Harvey
J Econ Entom SS(5):81I-812
Oct 1962 42I J822
8ackrubbers, Hypoderma, Hypoderma spp., Insecticides.

1329-67
THE METABOLISM OF P32-LABELED CIODRIN IN A LACTATING GOAT.
W F Chamberlain
J Econ Entom S7(3):329-33I
Jun 1964 421 J822
Clodrin, Goats, Metabolism.

1330-67
OIL-8ASED AND WATER-BASED CIODRIN SPRAYS FOR FLY CONTROL ON DAIRY CATTLE.
Tien-Hsi Cheng A A Hower R K Sprenkel

J Econ Entom 58(5):910-913
Oct 1965 421 JB22
Ciodrin, Dairy cattle, Diptera, Haematobia irritans, Musca autumnalis, Spraying, Stomoxys calcitrans.

1331-67
TESTS WITH SYSTEMIC INSECTICIDES IN RABBITS AS TOXICANTS FOR BODY LICE.
M M Cole D L Van Natta
J Econ Entom 57(1):67-70, BIBL. 70
Feb 1964 421 JB22
Pediculus humanus humanus, Pediculus humanus humanus, Rabbits, Systemic insecticides, Toxicology.

1332-67
DIMENSIONS OF THE CLEAR AREAS IN THE SKIN OF CHICKS THAT RESULTED FROM THE FEEDING BY LARVAE OF TWO STRAINS OF TROMBICULA SPLENDENS AT DIFFERENT PERIODS.
H F Cross
J Econ Entom 55(1):27-33
Feb 1962 421 JB22
Chicks, Feeding, Larvae, Trombicula splendens, Trombiculidae.

1333-67
EXPERIMENTS WITH HOMOGENATES OF LARVAE OF TROMBICULA SPLENDENS.
H F Cross
J Econ Entom 55(3):403-404
Jun 1962 421 JB22
Animals, Homogenization, Larvae, Trombicula splendens, Trombiculidae.

1334-67
IN VIVO STUDIES OF TISSUE REACTION IN CHICKS RESULTING FROM THE FEEDING BY LARVAE OF TROMBICULA SPLENDENS.
H F Cross
J Econ Entom 55(1):22-26, TABS.
Feb 1962 421 JB22
Chicks, Feeding, Larvae, Tissues, Trombicula splendens, Trombiculidae.

1335-67
PREVENTIVE SPRAYING SCHEDULES FOR DAIRY FARM FLY CONTROL.
G R DeFoliart
J Econ Entom 56(5):649-654, TABS.
Oct 1963 421 JB22
Dairy farms, Haematobia irritans (L.), Musca autumnalis DeGeer, Musca domestica L., Spraying, Stomoxys calcitrans (L.).

1336-67
CATTLE GRUB CONTROL BY THE ADDITION OF A SYSTEMIC INSECTICIDE TO DRINKING WATER.
R C Dobson D P Sanders
J Econ Entom 56(5):717-718
Oct 1963 421 JB22
Hypoderma, Hypoderma bovis (L.), Hypoderma lineatum (de Villers), Systemic insecticides, Water treatment.

1337-67
FACE FLY AND HORN FLY CONTROL ON CATTLE - 1962-1964.
C K Dorsey J O Heishmann C J Cunningham
J Econ Entom 59(3):726-732
Jun 1966 421 JB22
Cattle, Haematobia irritans, Haematobia irritans, Insecticides, Musca autumnalis, Musca autumnalis.

1338-67
LOW-VOLUME DERMAL APPLICATIONS AND INJECTIONS OF CO-RAL FOR SYSTEMIC CONTROL OF CATTLE GRUBS.
R O Drummond O H Graham
J Econ Entom 55(2):255-258
Apr 1962 421 JB22
Co-Ral, Hypoderma, Hypoderma, Insect control, Skin.

1339-67
CONTROL OF CATTLE GRUBS WITH COUMAPHOS APPLIED BY SPRAYER AND SPRAY-DIP MACHINE.
R O Drummond T M Whetstone S E Ernst
J Econ Entom 58(5):1017-1018
Oct 1965 421 JB22
Coumaphos, Hypoderma, Spraying equipment.

1340-67
INSECTICIDE TESTS AGAINST THE TROPICAL HORSE TICK, DERMACENTOR NITENS, ON HORSES.
R O Drummond O H Graham
J Econ Entom 57(4):549-553
Aug 1964 421 JB22
Anocentor nitens, Dermacentor nitens Neumann, Horses, Insecticides.

1341-67
FIELD TESTS WITH INSECTICIDES FOR THE CONTROL OF TICKS ON LIVESTOCK.
R O Drummond J G Medley
J Econ Entom 58(6):1131-1136, TABS.
Dec 1965 421 JB22
Amblyomma americanum (L), Cattle, Horses, Insecticides, Ixodides.

1342-67
CONTROL OF HOUSE FLIES IN BOVINE FECES BY A FEED ADDITIVE CONTAINING BACILLUS THURINGIENSIS VAR. THURINGIENSIS BERLINER.
P H Dunn
J Invertebrate Path 2(1):13-16
1960 421 JB26
Bacillus thuringiensis var. thuringiensis Berliner, Beef cattle, Feces, Feed additives, Musca domestica.

1343-67
CONTROL OF NORTHERN FOWL MITES, ORNITHONYSSUS SYLVARIUM, WITH SULFAQUINOXALINE.
D P Furman V S Stratton
J Econ Entom 56(6):904-905
Dec 1963 421 JB22
Coccidiosis, Northern fowl mites, Ornithonyssus sylviarum, Sulfaquinoxaline.

1344-67
TESTS AGAINST FACE FLIES ON CATTLE IN NEW JERSEY DURING 1961.
P Granett E J Hansens A J Forgash
J Econ Entom 55(5):655-659, TABS.
Oct 1962 421 JB22
Cattle, Musca autumnalis, Musca autumnalis De Geer.

1345-67
CONTROL OF FLIES ON CATTLE BY FREQUENT, LOW-VOLUME MIST SPRAY APPLICATION OF CIODRIN.
R A Hoffman I L Berry O H Graham
J Econ Entom 58(5):815-817
Oct 1965 421 JB22
Cattle, Ciodrin, Diptera.

1346-67
SPECIES OF HIPPELATES (DIPTERA: CHLORPIDAE) GNATS COLLECTED FROM MAMMALS.
E G Jay Jr
J Econ Entom 55(6):1011-1012
Dec 1962 421 JB22
Chloripidae, Diptera, Diptera, Hippelates, Mammals.

1347-67
FREE CHOICE FEEDING OF RONNEL MINERAL BLOCK AND GRANULES FOR FACE FLY, HORN FLY, AND CATTLE GRUB CONTROL.
F W Knapp
J Econ Entom 58(5):836-838
Oct 1965 421 JB22
Cattle grub, Diptera, Haematobia irritans, Haematobia irritans, Hypoderma, Musca autumnalis, Musca autumnalis, Ronnel mineral block, Ronnel mineral granules.

1348-67
CO-RAL AS A LITTER AND NEST DUST TO CONTROL THE CHICKEN BODY LOUSE.
F W Knapp
J Econ Entom 55(4):571-572
Aug 1962 421 JB22
Coumaphos, Dusting, Menacanthus stramineus, Menacanthus stramineus (Nitzsch).

1349-67
STUDIES ON THE REMOVAL OF EMBEDDED LONE STAR TICKS AMBLYOMMA AMERICANUM.
K L Knight D E Bryan C W Taylor
J Econ Entom 55(3):273-276, TABS.
Jun 1962 421 JB22
Amblyomma americanum, Animals, Chemicals, Insect removal, Lone star ticks.

1350-67
METABOLISM OF AND RESIDUES ASSOCIATED WITH DERMAL AND INTRAMUSCULAR APPLICATION OF RADIOLABELED FENTHION TO DAIRY COWS.
C O Knowles B W Arthur

30 1351-67

J Econ Entom 59(6):1346-1353
Dec 1966 421 J822
Dairy cattle, Fenthion, Insecticide residues, Metabolism, Musca domestica L., Radioactive tracers, Stomoxys calcitrans (L.).

1351-67
CONTROL OF CATTLE GRU85 8Y POUR-ON, INJECTION, AND SPRAY.
P H Kohler W M Rogoff
J Econ Entom 55(4):539-544, TA85.
Aug 1962 421 J822
Hypoderma, Hypoderma, Injections, Insect control, 5praying.

1352-67
INDUCED 8UILDUP OF POPULATIONS OF 8OVICOLA 8OVIS ON CATTLE IN OREGON.
L F Lewis D M Christenson
J Econ Entom 55(6):947-949
Dec 1962 421 J822
Animal protective devices, Bovicola bovis, Cattle, Cattle louse.

1353-67
FURTHER TESTS WITH POWER DUSTING TO CONTROL THE 5HEEP KED.
R E Pfadt R J Lavigne
J Econ Entom 58(1):37-38
Feb 1965 421 J822
Dusting, Insect control, Insecticide application, Insecticides, Melophagus ovinus, Melophagus ovinus (L).

1354-67
FAMILY DIFFERENCES IN ATTRACTIVENESS OF POULTRY TO THE CHICKEN 8ODY LOUSE, MENACANTHUS 5TRAMINEUS (MALLOPHAGA).
G D Quigley
J Econ Entom 58(1):8-10
Feb 1965 421 J822
Attractants, Menacanthus stramineus, Menacanthus stramineus (Mallophaga), Poultry.

1355-67
AREA POPULATION CONTROL OF HEEL FLIES 8Y RUELENE POUR-ON APPLICATION ANNUALLY TO CATTLE.
L A Riehl H W Lembright P D Ludwig
J Econ Entom 58(1):1-4
Feb 1965 421 J822
Cattle, Hypoderma bovis (L), Hypoderma lineata, Hypoderma lineatum (deVillers), Insect control, Population, Ruelene.

1356-67
THE EFFECT OF RADIATION TO PYRETHRINS APPLIED TO CATTLE.
R H Roberts
J Econ Entom 55(6):851-853
Dec 1962 421 J822
Cattle, Pyrethrum, Radiation, Ultraviolet rays.

1357-67
CATTLE GRU8 CONTROL WITH RUELENE AS A DIP AND A POUR-ON TREATMENT.
D K 5charff P D Ludwig
J Econ Entom 55(2):191-192
Apr 1962 421 J822
Hypoderma, Hypoderma, Ruelene.

1358-67
AN INVESTIGATION OF THE CATTLE LOUSE PRO8LEM.
D K Scharff
J Econ Entom 55(5):684-688, TA85.
Oct 1962 421 J822
Cattle louse, Haematopinus eurysternus (Nitzsch), Insecticides.

1359-67
DIFFERENTIAL 5USCEPTI8ILITY OF MAGGOTS OF 5EVERAL SPECIES TO DROPPINGS FROM CHICKENS FED INSECTICIDE-TREATED RATIONS.
M 5herman E Ross G H Komatsu
J Econ Entom 55(6):990-993, TA8S.
Dec 1962 421 J822
Chicks, Excreta, Food, Insecticides, Larvae, Maggots.

1360-67
FLY CONTROL IN FECES FROM CATTLE FED CO-RAL.
J S Skaptason C W Pitts
J Econ Entom 55(3):404-405
Jun 1962 421 J822
Cattle, Coumaphos, Diptera, Diptera, Feces, Insect control.

1361-67
THE EAR MITE, OTODECTES CYNOTIS, IN DOGS: A REPORT OF TWO SURVEYS.
R J Tonn
J Econ Entom 56(6):892
Dec 1963 421 J822
Dogs, Ear mite, Otodectes cynotis (Hering).

1362-67
LOW LEVEL FEEDING OF RONNEL IN A MINERAL SALT MIXTURE FOR AREA CONTROL OF THE FACE FLY, MUSCA AUTUMNALIS.
J 8 Wallace E C Turner Jr
J Econ Entom 57(2):264-267, PL.
Apr 1964 421 J822
Feeding, Musca autumnalis, Musca autumnalis, Ronnel.

1363-67
EXPERIMENTS FOR CONTROL OF THE FACE FLY IN VIRGINIA.
J 8 Wallace E C Turner Jr
J Econ Entom 55(3):415-416
Jun 1962 421 J822
Cattle, Insect control, Musca autumnalis, Musca autumnalis.

1364-67
LINDANE AND 8HC IN EGG YOLKS FOLLOWING RECOMMENDED USES FOR LOUSE AND MITE CONTROL.
G W Ware E C Naber
J Econ Entom 55(4):568-570
Aug 1962 421 J822
Anoplura, 8enzene hexachloride, Egg yolks, Insecticide residues, Lindane, Mites.

1365-67
THE EFFECT OF HORSE FLY CONTROL ON RATE OF INFECTION OF 8OVINE ANAPLASMOSIS UNDER FIELD CONDITIONS IN LOUISIANA.
8 H Wilson E C 8urns W T Oglesby R 8 Myers T E Rogers
J Econ Entom 56(5):578-579, TA8S.
Oct 1963 421 J822
Anaplasmosis, Louisiana, Tabanidae, Tabanidae.

1366-67
IRRITATION OF NALED MIST SPRAYS TO CATTLE.
R L Younger 8 W Wunderlich
J Econ Entom 57(1):172-173
Feb 1964 421 J822
Cattle, Naled.

1367-67
TOXICOLOGICAL STUDIES OF COMPOUND VC 1-13 IN LIVESTOCK.
R L Younger R D Radeleff C P Weldenbach
J Econ Entom 55(2):249-252
Apr 1962 421 J822
Chemicals, Compound VC 1-13, Livestock, Toxicology.

Parasites

1368-67
THE COMMON CATTLE GRU8 IN CATTLE IN SOUTHWESTERN TEXAS.
R O Drummond
J Econ Entom 59(5):1105-1108
Oct 1966 421 J822
Cattle, Cattle grub, Hypoderma lineatum (De Villers), Texas.

1369-67
CONTROL OF TICKS ON CATTLE WITH TOXAPHENE APPLIED 8Y POWER SPRAYER AND SPRAY RACE.
o Drummond T M Whetstone S E Ernst
J Econ Entom 59(2):471-472
Apr 1966 421 J822
Amblyomma americanum (L.), Cattle, Dermacentor albipictus (Packard), Ixodides, Spraying, Toxaphene.

Peaches, Pustular spot (peaches), Storage diseases.

40 COMMODITY PROTECTION

Storage Diseases

1370-67
A STUDY OF THE POSSIBLE CARCINOGENICITY OF IRRADIATED FOODS.
J L Radomski W B Deichmann B S Austin W E MacDonald
Toxicol Appl Pharmac 7(1):122-125
Jan 1965 391.8 T662
Carcinogens, Irradiated food.

1371-67
EFFECT OF MOISTURE CONTENT ON THE STORAGE OF BRAZIL NUTS.
G Ayerst D Budd
J Sci Food A 11(7):390-396
Jul 1960 382 S012
Bertholletia excelsa, Brazilnuts, Food moisture, Food storage.

1372-67
COOLING BULK GRAIN IN THE BRITISH CLIMATE TO CONTROL STORAGE INSECTS AND TO IMPROVE KEEPING QUALITY.
H D Burges N J Burrell
J Sci Food A 15(1):32
Jan 1964 382 S012
Cooling, Grain, Storage.

1373-67
BIOCHEMICAL CHANGES ASSOCIATED WITH THE DEVELOPMENT OF LOW-TEMPERATURE BREAKDOWN IN APPLES.
A C Hulme W H Smith L S C Wooltorton
J Sci Food A 15(5):303-307
May 1964 382 S012
Apples, Cold storage, Oxalacetic acid, Temperature.

1374-67
DECAY OF FRESHLY HARVESTED POTATOES IN AIR-TIGHT CONTAINERS.
L W Nielsen
Phytopatholo 50(9):649
Sep 1960 464.B P56
Containers, Plant decay, Potatoes, Soft rot (potatoes).

1375-67
INFLUENCE OF VARIOUS FACTORS ON THE DETERIORATION OF STORED CORN BY FUNGI.
S A Qasem C M Christensen
Phytopatholo 50(10):703-709, TABS.
Oct 1960 464.8 P56
Corn, Fungi, Stored products.

1376-67
EFFECT OF TEMPERATURE ON POST-HARVEST DECAY OF BLUEBERRY VARIETIES.
A W Stretch B H Davis
Phytopatholo 50(4):241
Apr 1960 464.B P56
Blueberries, Molds, Temperature.

1377-67
DETERIORATION OF STORED FEEDSTUFFS: RELATION OF INTERSPACE RELATIVE HUMIDITY TO GROWTH OF MOLDS AND HEATING OF FEED INGREDIENTS AND FEED MIXTURES.
B D Webb M E Bayliss L R Richardson
J Agr Food Ch B(5):371-374, TA8S.
Sep 1960 381 J8223
Feed, Heating, Humidity, Molds, Storage injuries, Stored products.

1378-67
OBSERVATIONS ON PUSTULAR SPOT ON PEACHES.
W R Wright M A Smith G B Ramsey L Beraha
Plant Dis R 44(6):424
15 Jun 1960 1.9 P69P

Arthropods

1379-67
LABORATORY EVALUATION OF SEVERAL CHEMICAL PROTECTANTS AGAINST THE SOUTHERN COWPEA WEEVIL, CALLOSOBRUCHUS CHINENSIS, ON STORED DRIED BEANS IN KOREA.
Y H Bang
J Econ Entom 56(5):588-591, TA8S.
Oct 1963 421 J822
Beans, Callosobruchus chinensis, Grain protectants, Korea, Southern cowpea weevil.

1380-67
TESTS WITH ENDOSULFAN TO PREVENT BORER DAMAGE TO UNSEASONED PINE LOGS.
W B Becker
J Econ Entom 57(1):166-167
Feb 1964 421 JB22
Endosulfan, Gnathotrichus materiarius, Monochamus spp., Pine logs, Pissodes approximatus.

1381-67
STUDIES OF PHOSPHINE AS A FUMIGANT FOR SACKED RICE UNDER GAS-TIGHT TARPAULINS.
R R Cogburn E W Tilton
J Econ Entom 56(5):706-708, TA8S.
Oct 1963 421 JB22
Fumigants, Phosphine, Rice, Sitophilus oryzae (L.), Tarpaulins, Tribolium confusum (Jacqueline du Val).

1382-67
SYSTEMIC INSECTICIDES TO CONTROL GREENBUGS ON SPRING PLANTED BARLEY.
L J DePew
J Econ Entom 57(2):250-252, PL.
Apr 1964 421 J822
Barley, Insect control, Schizaphis graminum, Schizaphis graminum, Systemic insecticides.

1383-67
PHORATE AND DEMETON FOR CONTROL OF THE PEA LEAF MINER ON SUGARBEETS.
J E Duffus N F McCalley
J Econ Entom 57(2):221-222
Apr 1964 421 JB22
Demeton, Insect control, Liriomyza langei, Pea leaf miner, Phorate, Sugarbeets.

1384-67
CONTROL OF THE SCALE PULVINARIA PSIDII ON IXORA.
W G Eden
J Econ Entom 57(3):416-417
Jun 1964 421 J822
Coccoidea, Ixora, Pulvinaria psidii.

1385-67
RELATIONSHIPS OF INSECTS TO HOT SPOTS IN STORED WHEAT.
L E Elghme
J Econ Entom 59(3):564-569
Jun 1966 421 JB22
Hot spots, Oryzaephilus surinamensis, Rhyzopertha dominica, Sitophilus granarius, Storage, Tribollum castaneum, Wheat.

1386-67
THE INCIDENCE, IMPORTANCE, AND CONTROL OF INSECTS FOUND IN STORED FOOD AND FOOD-HANDLING AREAS OF SHIPS.
B R Evans J E Porter
J Econ Entom 58(3):479-481, 818L.
Jun 1965 421 J822
Food handling, Food storage, Sanitation control (Insects).

1387-67
VAPORIZED DIBROM FOR CONTROL OF DROSOPHILA IN LEMON STORAGE HOUSES.
W L Golmerac L F Fox
J Econ Entom 55(2):220-221
Apr 1962 421 J822
Drosophila, Greenhouses, Insects, Lemons, Naled, Naled, Toxicology, Vapors.

40 1388-67

1388-67
EXPLORATORY TESTS WITH BROMODAN AS A PROTECTANT FOR WHEAT AGAINST STORED-PRODUCT INSECTS.
P K Harein H B Gillenwater
J Econ Entom S9(2):413-414
Apr 1966 421 J822
Bromodan, Sitophilus oryzae (L.), Stored products, Tribolium confusum Jacquelin duVal, Wheat.

1389-67
DOSAGE-TIME RELATIONSHIPS BETWEEN B0:20 (CCL4: CS2) AND ADULT RICE WEEVILS, SITOPHILUS ORYZAE.
P K Harein G F Krause
J Econ Entom 57(4):521-522, TABS.
Aug 1964 421 J822
Carbon disulfide, Carbon tetrachloride, Dosage, Fumigation, Sitophilus oryzae, Sitophilus oryzae.

1390-67
DOSAGE APPLIED AND CONCENTRATION OBTAINED IN THE FUMIGATION OF VARIOUS COMMODITIES WITH METHYL BROMIDE.
D L Lindgren L E Vincent
J Econ Entom 55(5):674-676
Oct 1962 421 J822
Adsorption, Fumigation, Methyl bromide.

1391-67
INSECT AND MITE INFESTATION IN EMPTY GRANARIES IN THE PRAIRIE PROVINCES.
E A R Liscombe F L Watters
Can Entom 94(4):433-441
Apr 1962 421 C16
Grain, Granary, Stored product insects.

1392-67
WITHIN-PACKAGE ETHYLENE DIBROMIDE FUMIGATION OF MANGOES AND GRAPEFRUIT IN FIBERBOARD CARTONS TO DESTROY MEXICAN FRUIT FLY INFESTATIONS.
M Mc Phale D, F Lopez J F Murcio Velasco
J Econ Entom 56(4):496-498, TABS.
Aug 1963 421 J822
Anastrepha ludens, Anastrepha ludens (Loew), Cartons, Ethylene dibromide, Fiberboard, Fumigation, Grapefruit, Mangoes.

1393-67
PREFERENCE OF TRIBOLIUM CASTANEUM FOR WHEAT CONTAINING VARIOUS PERCENTAGES OF DOCKAGE.
H E McGregor
J Econ Entom S7(4):S11-S13, TABS.
Aug 1964 421 J822
Dockage, Tribolium castaneum, Wheat.

1394-67
FIELD TESTS WITH LOW-LEVEL FEEDING OF RONNEL FOR CONTROL OF CATTLE GRUBS AND HORN FLIES.
J G Medley R O Drummond O H Graham
J Econ Entom 56(4):S00-S03, TABS.
Aug 1963 421 J822
Haematobia irritans, Haematobia irritans (L.), Hypoderma, Hypoderma lineatum (De Villers), Ronnel, Systemic insecticides.

1395-67
CONTROL OF THE TOBACCO MOTH WITH DICHLORVOS.
A F Press Jr D P Childs
J Econ Entom 59(2):264-265
Apr 1966 421 J822
Dichlorvos, Ephestia elutella, Ephestia elutella, Stored products.

1396-67
TOLERANCE OF IMPORTED GARLIC BULBS TO METHYL BROMIDE FUMIGATION AND HOT-WATER DIPS.
H Roth H H Richardson
J Econ Entom S6(6):B39-B42, TABS.
Dec 1963 421 J822
Brachycerus, Dipping, Dyspessa ulaia, Fumigation, Garlic, Hot water treatment (plants), Methyl bromide.

1397-67
AN OUTLINE OF RECENT PROGRESS IN STORED-PRODUCTS ENTOMOLOGY.
P Simmons
J Econ Entom S7(1):29-31
Feb 1964 421 J822
Stored-products insect research.

1398-67
EFFECTS OF TEMPERATURE, REDUCED PRESSURE, AND MOISTURE CONTENT ON SORPTION AND RETENTION OF ETHYLENE DIBROMIDE BY WHEAT AND CORN.
W B Sinclair D L Lindgren R Forbes
J Econ Entom S7(4):470-475, TABS.
Aug 1964 421 J822
Absorption, Corn, Ethylene dibromide, Grain moisture, Pressure, Temperature, Wheat.

1399-67
INSECTS FOUND IN OHIO GRAIN ELEVATORS AND FEED MILLS.
C A Triplehorn
J Econ Entom S8(3):S78-S79
Jun 196S 421 J822
Feed milling, Grain elevators, Ohio, Stored-product insects.

1400-67
WHEAT FRACTURING AS AFFECTING INFESTATION BY CRYPTOLESTES FERRUGINEUS.
D W Tuff H S Telford
J Econ Entom S7(4):S13-S16, TABS.
Aug 1964 421 J822
Cryptolestes ferrugineus, Wheat.

1401-67
CHEMICAL CONTROL OF PERIODICAL CICADA, MAGICICADA SEPTENDECIM, ON APPLES IN NORTH CAROLINA.
G F Turnipseed
J Econ Entom S7(2):29S
Apr 1964 421 J822
Apples, Insect control, Magicicada septendecim, Magicicada septendecim, North Carolina.

Rodents & Other Pests

1402-67
ETHYLENE OXIDE FUMIGANTS TO ELIMINATE QUARANTINABLE SNAILS COCHLICELLA OR THEBA IN CARGO.
H H Richardson H Roth
J Econ Entom S6(6):B36-B39
Dec 1963 421 J822
Ethylene oxide, Freight, Fumigants, Snails.

50 ENVIRONMENTAL CONTAMINATION

1403-67
THE MYCOFLORA OF PEANUTS IN STORAGE.
U L Diener
Phytopatholo 50(3):220-223
Mar 1960 464.B P56
Mycoflora, Peanuts, Storage.

1404-67
REVIEW OF ADSORPTION AND DESORPTION OF ORGANIC PESTICIDES BY SOIL COLLOIDS, WITH IMPLICATIONS CONCERNING PESTICIDE BIO-ACTIVITY.
G W Bailey J L White
J Agr Food Ch 12(4):324-332, BIBL., 331-332
Jul 1964 381 JB223
Pesticides, Soil adsorption, Soil colloids.

1405-67
SUSCEPTIBILITY AND RESISTANCE OF MOSQUITO FISH TO SEVERAL INSECTICIDES.
C E Boyd D E Ferguson
J Econ Entom 57(4):430-431
Aug 1964 421 JB22
Insecticides, Mosquito fish.

1406-67
TOXICITY OF DIBROM VAPORS TO GREENHOUSE INSECTS.
C H Condron R B Nelswander R D Wessel
J Econ Entom 55(2):221-244, TABS.
Apr 1962 421 JB22
Greenhouses, Insects, Naled, Naled, Toxicology, Vapors.

1407-67
EFFECT OF SOIL APPLICATIONS OF NEMATOCIDES ON EMERGENCE OF PERIODICAL CICADA.
R W Dean D H Palmitter
J Econ Entom 56(4):540
Aug 1963 421 J822
Magicicada septendecim, Magicicada septendecim (L.), Nematocides, Soil treatment.

1408-67
DETERMINATION OF PHOSPHINE IN AIR BY GAS CHROMATOGRAPHY.
T Dumas
J Agr Food Ch 12(3):257-258
May 1964 3B1 JB223
Air, Chromatography, Phosphine.

1409-67
HERBICIDE UPTAKE FROM SOILS: UPTAKE OF RADIOACTIVE ETHYL-N,N-)DI-N-PROPYLTHIO CARBAMATE (EPTC-S35) AND TRANSLOCATION OF SULFUR-35 IN VARIOUS CROPS.
S C Fang P Thelsen
J Agr Food Ch 8(4):295-298
Jul 1960 3B1 JB223
Crops, EPTC , Radioactive substances, Soil contamination, Sulfur Isotopes, Sulfur-35.

1410-67
A NOTE ON THE EFFECTS OF SOME SOIL STERILANTS ON THE MINERALISATION AND NITRIFICATION OF SOIL-NITROGEN.
J K R Gasser J E Peachey
J Sci Food A 15(3):142-146
Mar 1964 382 SO12
Mineralization (nutrients), Nitrification, Nitrogen, Soil sterilization.

1411-67
THE SURVIVAL OF VERTICILLIUM ALBO-ATRUM IN MUCK SOILS.
R J Green Jr
Phytopatholo 50(9):637
Sep 1960 464.8 P56
Inoculum, Muck soils, Verticillium albo-atrum.

1412-67
SOIL EFFECTS ON PESTICIDES:DETERMINATION OF CARBON IN ORGANIC SOILS BY OXYGEN FLASK COMBUSTION.
N H Gutenmann D J Lisk
J Agr Food Ch 9(6):489-490
Nov 1961 381 J8223
Carbon, Flask combustion, Pesticides, Soil analysis.

1413-67
INFLUENCE OF SOIL TYPE ON THE ACTIVITY OF INSECTICIDES IN SOIL.
C R Harris
J Econ Entom 59(5):1221-1225

50 1414-67

Oct 1966 421 J822
Acheta (>Gryllus) pennsylvanicus (8urmeister),
Soil insecticides, Soil series.

1414-67
ADSORPTION OF SEVERAL PRE-EMERGENCE HER8ICIDES 8Y HAWAIIAN SUGAR CANE SOILS.
H W Hilton Q H Yuen
J Agr Food Ch 11(3):230-234, TA8S.
May 1963 381 J8223
Hawaii, Herbicides, Soil adsorption, Sugar cane.

1415-67
THE CONCENTRATION OF DIMEFOX IN AIR RESULTING FROM ITS USE ON HOPS.
G A Lloyd J C Tweeddie
J Sci Food A 15(3):169-172
Mar 1964 382 S012
Air, Air pollution, Dimefox, Hops.

1416-67
TWO NEW COMPOUNDS AS SEED AND SOIL TREATMENTS.
E N Pelletier H C Palmer
Phytopathole 50(9):650-651
Sep 1960 464.8 P56
Seed treatment, Soil analysis.

1417-67
PERSISTENCE OF INSECTICIDES IN SOIL AND THEIR EFFECTS ON COTTON IN GEORGIA.
J E Roberts R D Chisholm L Koblitsky
J Econ Entom 55(2):153-155, TA8S
Apr 1962 421 J822
Cotton, Georgia, Insecticide residues.

1418-67
AVAILA8ILITY OF DIELDRIN TO ADULT 8LISSUS LEVCOPTERUS AND LARVAL CYCLOCEPHALA IMMACULATA IN TREATED SAND, LOAM, AND MUCK SOILS.
R J Roberts
J Econ Entom 56(6):781-785, TA8S.
Dec 1963 421 J822
8lissus leucopterus (Say),
Cyclocephala immaculata (Oliver), Insect adults,
Insecticide sorption (soils), Larvae, Loam, Muck soils,
Sand.

1419-67
REVIEW OF DISAPPEARANCE OF SU8STITUTED UREA HER8ICIDES FROM SOIL.
T J Sheets
J Agr Food Ch 12(1):30-33, 8I8L. 33
Jan 1964 381 J8223
Herbicides, Soil contamination, Urea.

1420-67
THIOCYANATE SCORCH ON GRASSLAND.
H Tod
J Sci Food A 15(6):362-364
Jun 1967 382 S012
Pastures, Scorch, Thiocyanates.

55 RESIDUES

1421-67
GAS CHROMATOGRAPHIC AND COLORIMETRIC MEASUREMENT OF DIMETHOATE RESIDUES.
C H van Middelem R E Waites
J Agr Food Ch 12(2):178-182
Mar 1964 381 J8223
Chromatography, Colorimetry, Dimethoate,
Insecticide residues.

1422-67
RESIDUES IN CATTLE TISSUES FOLLOWING 8ACK-LINE AND SPRAY APPLICATIONS OF TRICHLORFON.
T R Adkins Jr
J Econ Entom 59(6):1423-1425
Dec 1966 421 J822
Cattle, Insecticide application, Insecticide residues,
Trichlorfon.

1423-67
RESIDUE DEPOSITION OF CO-RAL IN THE TISSUES OF 8ACK-LINE-TREATED CATTLE.
jr, T R Adkins D H Kropf S G Woods
J Econ Entom 56(6):759-761
Dec 1963 421 J822
Cattle, Co-Ral, Insecticide application,
Insecticide residues.

1424-67
COLORIMETRIC DETERMINATION OF DEXON RESIDUES IN CROPS.
C A Anderson J M Adams
J Agr Food Ch 11(6):474-477
Nov 1963 381 J8223
Colorimetry, Fungicide residues,
Para-dimethylaminobenzenediazo sodium sulfonate,
Plant residues.

1425-67
INSECTICIDE RESIDUES: PROCEDURE FOR CLEAN UP OF PLANT EXTRACTS PRIOR TO ANALYSES FOR DDT AND RELATED PESTICIDES.
C Anglin W P McKinley
J Agr Food Ch 8(3):186-189, TA8S.
May 1960 381 J8223
DDT , Pesticides, Plant extracts.

1426-67
METHOD FOR PHOSPHAMIDON RESIDUE ANALYSIS.
R Anliker R E Menzer
J Agr Food Ch 11(4):291-293
Jul 1963 381 J8223
Chromatography, Insecticide residues, Phosphamidon.

1427-67
DETERMINATION OF AMI8EN [illegible] BY [illegible] TION AFFINITY GAS CHROMATOGRAPHY.
C A 8ache W H Gutenmann D J Lisk
J Agr Food Ch 12(2):185-187
Mar 1964 381 J8223
Amiben, Chromatography, Herbicide residues, Tomatoes.

1428-67
INSECTICIDE RESIDUE STUDIES: THE FATE OF HEPTACHLOR IN THE SOIL FOLLOWING GRANULAR APPLICATION TO THE SURFACE.
W F 8arthel R T Murphy W G Mitchell C Corley
J Agr Food Ch 8(6):445-447, TA8S.
Nov 1960 381 J8223
Heptachlor, Insecticide application, Insecticide residues.

1429-67
THE CONTACT TOXICITY OF SOME PESTICIDE RESIDUES TO HYMENOPTEROUS PARASITES AND COCCINELLID PREDATORS.
8 R 8artlett
J Econ Entom 56(5):694-698
Oct 1963 421 J822
Coccinellidae, Hymenoptera, Parasitic insects,
Pesticide residues, Predaceous insects.

1430-67
HER8ICIDE RESIDUES: A COLORIMETRIC METHOD FOR THE DETERMINATION OF EPTC RESIDUES IN CROPS AND SOILS.
G H 8atchelder G G Patchett
J Agr Food Ch 8(3):214-216, TA8S.
May 1960 381 J8223
Colorimetry, Crops, Herbicide residues, EPTC , Soils.

1431-67
DIMETHOATE RESIDUES ON SOY8EAN, CORN, AND GRASS FORAGE.
E W 8eck L H Dawsey D W Woodham D 8 Leuck
J Econ Entom 59(1):78-82
Feb 1966 421 J822
Corn, Dimethoate, Forage plants, Insecticide residues, Soybeans.

1432-67
RESIDUES OF ENDOSULFAN IN MEAT AND MILK OF CATTLE FED TREATED FORAGES.
E W 8eck J C Johnson Jr D W Woodham D 8 Leuck L H Dawsey J E Robbins M C 8owman
J Econ Entom 59(6):1444-1450
Dec 1966 421 J822
8eef, Cattle, Endosulfan, Forage plants, Insecticide residues, Milk.

1433-67
MICROCOULOMETRIC GAS CHROMATOGRAPHIC ANALYSIS OF GRAPES AND COTTONSEED FOR CHLORO8ENZILATE RESIDUES.
H 8eckman A 8evenue
J Agr Food Ch 12(2):183-185
Mar 1964 381 J8223
Acaricide residues, Chlorobenzilate, Chromatography, Cottonseed, Grapes.

1434-67
FUMIGANT RESIDUES: RETENTION OF ACRYLONITRILE AND CAR8ON TETRACHLORIDE 8Y SHELLED WALNUTS FUMIGATED WITH ACRYLON.
8 8erck
J Agr Food Ch 8(2):128-131
Mar 1960 381 J8223
Acrylon, Acrylonitrile, Carbon tetrachloride, Fumigant residues, Walnuts.

1435-67
A TOTAL PHOSPHORUS TECHNIQUE FOR DETERMINING ORGANOPHOS-PHORUS PESTICIDE RESIDUES USING SCHOENIGER FLASK COM8USTION.
R C 8linn
J Agr Food Ch 12(4):337-338
Jul 1964 381 J8223
Combustion, Organophosphorus, Pestlcide residues.

1436-67
A CARCINOGENICITY EVALUATION OF POTASSIUM ARSENITE AND ARSANILIC ACID.
R K 8outwell
J Agr Food Ch 11(5):381-385
Sep 1963 381 J8223
Arsanilic acid, Carcinogens, Potassium arsenite.

1437-67
DETERMINATION OF INSECTICIDE RESIDUES ON GREEN AND FLUE-CURED TO8ACCO AND IN MAIN-STREAM CIGARETTE SMOKE.
T G 8owery F E Guthrie
J Agr Food Ch 9(3):193-197
May 1961 381 J8223
Cigarette smoke, Insecticide residues, Tobacco.

1438-67
THE COLORIMETRIC DETERMINATION OF O-ISOPROPOXYPHENYL-N-METHYLCAR8AMATE.
P 8racha
J Agr Food Ch 12(5):461-463, TA8S.
Sep 1964 381 J8223
o-isopropoxyphenyl-N-methylcarbamate, 8ayer, Colorimetry, Insecticide residues.

1439-67
RESIDUAL SPRAYS FOR THE CONTROL OF HOUSE FLIES IN FIELD TESTS.
U E 8rady Jr D W Meifert G C La8recque
J Econ Entom 59(6):1522-1523
Dec 1966 421 J822
Insecticide residues, Musca domestica, Musca domestica, Spraying.

1440-67
ARE ANIMAL FEED ADDITIVES HAZARDOUS TO HUMAN HEALTH.
J 8rueggemann J Schole J Tiews
J Agr Food Ch 11(5):367-371
Sep 1963 381 J8223
Feed additives, Feed toxicity, Tissue residues.

1441-67
DETERMINATION OF NN-DIPHENYL-P-PHENYLENEDIAMINE (DPPD) IN FAT AND OTHER 8IOLOGICAL MATERIALS.
P 8udowski I Ascarelli A 8ondi
J Sci Food A 11(9):503-509
Sep 1960 382 S012
Egg yolks, Fats, Feed, DPPD , Serum.

1442-67
MECHANISMS OF CONTAMINATION OF ALFALFA WITH HEPTACHLOR AND HEPTACHLOR EPOXIDE.
H D 8yrne A L Steinhauer
J Econ Entom 59(2):338-341
Apr 1966 421 J822
Alfalfa, Heptachior, Heptachior epoxide, Soil contamination.

1443-67
CHEMICAL AND MICRO8IOLOGICAL SURVEYS ON THE EFFECTS OF DITHIOCAR8AMATE FUNGICIDES ON WINE-MAKING.
C Cantrell F Tafuri A Martini
J Sci Food A 15(3):186-196, TA8S.
Mar 1964 382 S012
Fungicides, Thiols, Wine manufacture.

1444-67
DETERMINATION OF TEPA RESIDUES ON CHEMOSTERILIZED MEXICAN FRUIT FLIES.
S C Chang A 8 8orkovec
J Econ Entom 59(1):102-104
Feb 1966 421 J822
Anastrepha ludens (Loew), Chemosterilized, Insecticide residues, Tepa.

1445-67
RESIDUES OF OO-DIMETHYL S-(N-METHYLCAR8AMOYLMETHYL) PHOSPHOROTHIOLOTHIONATE (DIMETHOATE) IN SPRAYED CROPS.
E D Chilwell P T 8eecham
J Sci Food A 11(7):400-407, TA8S.
Jul 1960 382 S012
Crops, Dimethoate, Insecticide residues, Spraying.

1447-67
INSECTICIDE RESIDUES: MEAT AND MILK RESIDUES FROM LIVESTOCK SPRAYS.
H V Claborn R C 8ushland H D Mann M C Ivey R D Radeleff
J Agr Food Ch 8(6):439-442, 8I8L. 441-442, TA8S.
Nov 1960 381 J8223
Insecticide residues, Livestock, Meat, Milk, Spraying.

1448-67
INSECTICIDE RESIDUES IN MILK: DETERMINATION OF METHOXYCHLOR AND OR META8OLITES IN MILK FOLLOWING TOPICAL APPLICATION TO DAIRY COWS.
M L Cluett W K Lowen H L Pease C A Woodhouse
J Agr Food Ch 8(4):277-281, TA8S.
Jul 1960 381 J8223
Dairy cattle, Insecticide application, Insecticide residues, Metabolites, Methoxychlor, Milk, Milk analysis.

1449-67
DETERMINATION OF FURALTADONE IN MILK.
P L Cox J P Heotis
J Agr Food Ch 11(6):499-501
Nov 1963 381 J8223
Drug residues, Furmethonol, Furmethonol, Milk.

1450-67
INSECTICIDE RESIDUES:DETERMINATION OF RESIDUES OF PHORATE AND ITS INSECTICIDALLY ACTIVE META8OLITIES 8Y CHOLINESTERASE INHI8ITION PART I. 8ASIC METHOD PART II. ALTERNATIVE SAMPLE PREPARATION AND RECOVERY DATA.
A N Curry L M Kress R A L Paylor
J Agr Food Ch 9(6):469-477
Nov 1961 381 J8223
Cholinesterases, Insecticide residues, Metabolites, Phorate.

1451-67
INSECTICIDE RESIDUES: PERSISTANCE OF DIMETHOATE AND META8OLITES FOLLOWING FOLIAR APPLICATION TO PLANTS.
W C Dauterman G 8 Vladu J E Casida R D O 8rien
J Agr Food Ch 8(2):115-119
Mar 1960 381 J8223
Dimethoate, Foliar application, Metabolites.

55 1452-67

1452-67
A FIELD TECHNIQUE FOR OIL DEPOSIT DETERMINATION ON CITRUS THROUGH COLORIMETRIC ANALYSIS.
H A Dean E L Wilson J C 8ailey R W White L A Riehl
J Econ Entom 57(4):458-461
Aug 1964 421 J822
Citrus, Colorimetry, Oil deposits.

1453-67
TRANSLOCATION OF DDT AND HEPTACHLOR IN SOY8EANS.
W G Eden 8 W Arthur
J Econ Entom 58(1):161-162
Feb 1965 421 J822
Heptachlor, Insecticide translocation, DDT , Soybeans.

1454-67
DETERMINATION OF ORGANIC FLUORINE RESIDUES IN 8LACKCURRANTS.
H Egan R Wood
J Sci Food A 11(10):582-584
Oct 1960 382 S012
Currants, Fluorine compounds, Insecticide residues.

1455-67
RESIDUES OF SEVIN IN WHOLE MILK FROM SPRAYED AND DUSTED COWS.
J F Eheart E C Turner J Dickinson
J Econ Entom 55(4):504-505
Aug 1962 421 J822
Carbaryl, Cattle, Dusting, Milk, Residues, Spraying.

1456-67
COM8INATION OF THERAPEUTIC AGENTS.
R F Elliott
J Agr Food Ch 11(5):391-393, TA8S.
Sep 1963 381 J8223
Feed additives, Therapeutics, Tissue residues.

1457-67
THE ADDITIVES AMENDMENT IN PRACTICE.
R W Engel
J Agr Food Ch 11(5):371-373
Sep 1963 381 J8223
Feed additives, Legislation, Nutrition.

1458-67
CHEMICAL EVALUATION OF PESTICIDE RESIDUES ON STRAW8ERRIES.
J E Fahey J G Rodriguez H W Rusk C E Chaplin
J Econ Entom 55(2):179-184, TA8S.
Apr 1962 421 J822
Chemical control (insects), Chemistry, Pesticide residues, Strawberries.

1459-67
CHLORINATED HYDROCAR8ON INSECTICIDE RESIDUES IN SOILS OF UR-8AN AREAS,8ATTLE CREEK, MICHIGAN.
J F Fahey J W 8utcher R T Murphy
J Econ Entom 58(5):1026-1027
Oct 1965 421 J822
Insecticide residues, Michigan, Soil analysis.

1460-67
A SIMULATED-FIELD METHOD OF TESTING RESIDUAL INSECTICIDE DEPOSITS AGAINST COCKROACHES.
A D Flynn H F Schoof
J Econ Entom 59(1):110-113
Feb 1966 421 J822
8lattidae, 8lattidae, Insecticide residues.

1462-67
ACARICIDE RESIDUES:A MODIFICATION OF THE ROSENTHAL METHOD FOR RAPID DETERMINATION OF KELTHANE RESIDUES.
D A George J E Fahey K C Walker
J Agr Food Ch 9(4):264-266
Jul 1961 381 J8223
Acaricides, Dicofol, Insecticide residues, Rosenthal s test.

1463-67
COLORIMETRIC METHOD FOR THE ESTIMATION OF DIMETHOATE RESIDUES.
P A Giang M S Schechter
J Agr Food Ch 11(1):63-66
Jan 1963 381 J8223
Colorimetry, Dimethoate, Insecticide residues.

1464-67
INSECTICIDE RESIDUES: COLORIMETRIC DETERMINATION OF RESIDUES OF PHORATE AND ITS INSECTICIDALLY ACTIVE META8O-LITES.
P A Giang M S Schecter
J Agr Food Ch 8(1):51-54
Jan 1960 381 J8223
Colorimetry, Insecticide residues, Metabolites, Phorate.

1465-67
INSECTICIDE RESIDUES:A PROCEDURE FOR THE MICRODETERMINATION OF 1-8UTOXY-2-(2-THIOCYANOETHOXY)-ETHANE (LETHANE 384) WITH APPLICATIONS FOR DETERMINATION OF RESIDUES IN MILK AND ANI-MAL TISSUES.
C F Gordon L D Haines A L Wolfe
J Agr Food Ch 9(6):478-481
Nov 1961 381 J8223
Insecticide residues, Lethane 384.

1466-67
COLORIMETRIC METHOD FOR THE DETERMINATION OF ETHION OF RESIDUES.
J R Graham E F Orwoll
J Agr Food Ch 11(1):67-69
Jan 1963 381 J8223
Colorimetry, Ethion, Insecticide residues, Spectrophotometry.

1467-67
HER8ICIDE RESIDUES: IMPROVED EXTRACTION PROCEDURE FOR THE DETERMINATION OF EPTC RESIDUES IN POTATOES.
W H Gutenmann D J Lisk
J Agr Food Ch 8(3):216-217
May 1960 381 J8223
Herbicide residues, EPTC , Potatoes.

1468-67
THE ELECTRON AFFINITY DETECTOR IN PESTICIDE RESIDUE ANALYSIS.
W H Gutenmann D J Lisk
J Agr Food Ch 11(4):301-303, TA8S.
Jul 1963 381 J8223
Chromatography, Electron affinity, Pesticide residues.

1469-67
RAPID DETERMINATION OF DIPHENYLAMINE IN APPLES 8Y DIRECT 8ROMINATION AND GAS CHROMATOGRAPHY.
W H Gutenmann D J Lisk
J Agr Food Ch 11(6):468-470
Nov 1963 381 J8223
Apples, 8romination, Chromatography, Diphenylamine, Pesticide residues.

1470-67
THIODAN AND TELODRIN RESIDUES ON TO8ACCO.
F E Guthrie T G 8owery
J Econ Entom 55(6):1017-1018
Dec 1962 421 J822
Endosulfan, Endosulfan, Insecticide residues, Telodrin, Tobacco.

1471-67
INSECTICIDE RESIDUES IN MILK: THE EFFECTS OF FEEDING HIGH LEVELS OF SEVIN ON RESIDUE, FLAVOR, AND ODOR OF THE MILK OF DAIRY CATTLE.
G G Gyrisco D J Lisk S N Fertig E W Huddleston F H Fox R F Holland C W Trimberger
J Agr Food Ch 8(5):409-410
Sep 1960 381 J8223
Carbaryl, Dairy cattle, Insecticide residues, Milk.

1472-67
THE RATIONALE FOR MEDICATED FEEDS.
L E Hanson
J Agr Food Ch 11(5):365-367
Sep 1963 381 J8223
Drugs, Feed additives, Livestock diseases.

1473-67
RESIDUES OF HEPTACHLOR EPOXIDE AND TELODRIN IN MILK FROM COWS FED AT PART PER 8ILLION INSECTICIDE LEVELS.
D D Hardee W H Gutenmann G I Keenan G G Gyrisco D J Lisk F H Fox G W Trimberger R F Holland
J Econ Entom 57(3):404-407
Jun 1964 421 J822
Dairy cattle, Heptachlor epoxide, Insecticide residues, Milk, Telodrin.

1474-67
FUMIGATION EFFICIENCY AS AFFECTED 8Y EXPOSURES, FORMULATIONS AND 8Y INSECT SPECIES AND STAGES.
P K Harein
J Econ Entom 55(4):527-533, TA8S.
Aug 1962 421 J822
Fumigation, Grain, Stored products, Toxicology.

1475-67
DDT RESIDUES ON SWEET CORN EAR TIPS AND SILKS AFTER TREATMENT WITH DUST, SPRAY, OR GRANULAR FORMULATIONS.
E A Harrell M C 8owman W W Hare
J Econ Entom 58(1):55-58, 8I8L.
Feb 1965 421 J822
Dusting, Heliothis zea (8oddie), Insecticide application, Insecticide residues, DDT , Spraying, Sweetcorn.

1476-67
COLORIMETRIC DETERMINATION OF 6-METHYL-2,3-QUINOXALINEDITHIOL CYCLIC CAR8ONATE (MORESTAN) RESIDUES IN APPLES AND PEARS.
R Havens J M Adams C A Anderson
J Agr Food Ch 12(3):247-248
May I964 381 J8223
Apples, Colorimetry, Morestan, Pears, Pesticide residues.

1477-67
THE MIGRATION OF PIPERONYL 8UTOXIDE FROM TREATED MULTIWALL KRAFT 8AGS INTO FOUR COMMODITIES.
H A Highland E G Jay M Phillips D F Davis
J Econ Entom 59(3):543-545
Jun 1966 421 J822
8ags, Piperonyl butoxide, Stored products contamination.

1478-67
HER8ICIDE RESIDUES:THE DETERMINATION OF ETHYL N,N-DI-N-PROPYLTHIOLCAR8AMATE (EPTC) IN SOIL 8Y GAS CHROMATOGRAPHY.
R E Hughes Jr. V H Freed
J Agr Food Ch 9(5):38I-382
Sep 1961 38I J8223
Chromatography, Herbicides, Insecticide residues, EPTC .

1479-67
CHEMICAL STUDIES ON THE HERRING (CLUPEA HARENGUS). XI PRELIMINARY GAS-CHROMATOGRAPHIC STUDY OF VOLATILE SULPHUR COMPOUNDS PRODUCED DURING THE COOKING OF HERRING.
R 8 Hughes
J Sci Food A 15(5):290-292
May I964 382 SO12
Chromatography, Clupea harengus, Herrings, Sulfur compounds, Volatile substances.

1480-67
A TECHNIQUE FOR TESTING ACARICIDE RESIDUES AGAINST TWO-SPOTTED SPIDER MITES ON FIELD-GROWN ROSES.
S W Jacklin F F Smith
J Econ Entom 59(1):244
Feb 1966 421 J822
Acaricides, Insecticide residues, Rosa, Tetranychus telarius (L.), Tetranychus urticae.

1481-67
ACUTE TOXICITY OF DELNAV AND ITS RESIDUES IN TISSUES OF LIVESTOCK.
J 8 Jackson R D Radeleff R H Roberts L M Hunt W 8 8uck
J Econ Entom 55(5):699-702, TA8S.
Oct 1962 421 J822
Dioxathion, Insecticide residues, Livestock, Tissues, Toxicology.

1482-67
DETERMINATION OF SEVIN INSECTICIDE AND ITS META8OLITES IN POULTRY TISSUES AND EGGS.
D P Johnson F E Critchfield 8 W Arthur
J Agr Food Ch 11(1):77-80, TA8S.
Jan 1963 381 J8223
Carbaryl, Eggs, Insecticide residues, Poultry meat.

1483-67
THE IMPACT ON THE ANALYTICAL CHEMIST OF GOVERNMENT REGULATIONS PERTAINING TO TISSUE RESIDUES.
E E Kennedy
J Agr Food Ch 11(5):393-395
Sep 1963 381 J8223
Agricultural regulation, Feed additives, Tissue residues.

1484-67
THE SPECTROPHOTOFLUOROMETRIC DETERMINATION OF O,O-DIETHYL O-2-PYRAZINYL PHOSPHOROTHIOATE (ZINOPHOS) AND ITS OXYGEN ANALOG IN SOIL AND PLANT TISSUES.
U Kilgemagi L C Terriere
J Agr Food Ch 11(4):293-297, TA8S.
Jul 1963 38I J8223
Nematocides, O,O-diethyl O-2-pyrazinyl phosphorothioate, Pesticide residues, Spectrophotometry, Zinophos.

1485-67
A MODIFIED ANALYTICAL METHOD FOR MICROGRAM AMOUNTS OF META-ALDEHYDE IN PLANT MATERIAL.
Y Kimura V L Miller
J Agr Food Ch 12(3):249-250
May 1964 381 J8223
Metaldehyde, Pesticide residues, Plant extracts.

1486-67
A 8ROAD VIEW OF THE PRO8LEM OF ADDITIVES IN FEEDS AND FOODS.
C G King
J Agr Food Ch 11(5):363-364
Sep 1963 38I J8223
Feed additives, Food, Nutrition.

1487-67
DETERMINATION OF POLYCHLORINATED 8ENZOIC ACID HER8ICIDE RESIDUES 8Y GAS CHROMATOGRAPHY.
J J Kirkland A L Pease
J Agr Food Ch 12(5):468-472
Sep 1964 381 J8223
8enzoic acid, Chromatography, Herbicide residues.

1488-67
PESTICIDES AND FOOD FLAVOR:STUDIES IN TASTE PANEL METHODOLOGY.
A Kramer E F Murphy A M 8riant M Wang
J Agr Food Ch 9(3):224-228
May 1961 381 J8223
Food flavor, Pesticides, Taste testing.

1489-67
HER8ICIDE RESIDUES IN MILK:FORM AND MAGNITUDE OF 2,2-DICHLOROPROPIONIC ACID (DALAPON) RESIDUES IN MILK.
A H Kutschinski
J Agr Food Ch 9(5):365-368
Sep 1961 381 J8223
Dalapon, Herbicides, Insecticide residues, Milk.

1490-67
RAPID CLEANUP OF DAIRY PRODUCTS FOR ANALYSIS OF CHLORINATED INSECTICIDE RESIDUE 8Y ELECTRON CAPTURE GAS CHROMATOGRAPHY.
8 E Langlois A R Stemp 8 J Liska
J Agr Food Ch 12(3):243-245
May 1964 381 J8223
Chromatography, Dairy products, Insecticide residues.

1491-67
FUNGICIDE RESIDUES:A MODIFIED GI88S METHOD FOR THE DETERMINATION OF 1 P.P.M. OR LESS OF O-PHENYLPHENOL IN FRUITS.
L R Leinbach J E 8rekke
J Agr Food Ch 9(3):205-206
May 1961 381 J8223
Distillation, Fruit, Fungicides, Insecticide residues, Phenylphenol.

1492-67
VERTICAL DISTRI8UTION AND PERSISTENCE OF INSECTICIDAL RESIDUES IN SOILS AS INFLUENCED 8Y MODE OF APPLICATION AND A COVER CROP.
E P Lichtenstein C H Mueller G R Myrdal K R Schulz
J Econ Entom 55(2):215-219, TA8S.
Apr 1962 421 J822
Cover crops, Insecticide application, Insecticide residues, Soils.

1493-67
HER8ICIDE RESIDUES: DETERMINATIONS OF SMALL AMOUNTS OF ARSENIC IN POTATOES. EXTRACTION AND REDUCTION OF MOLY8DOARSENIC ACID.
D J Lisk
J Agr Food Ch 8(2):121-123
Mar 1960 381 J8223
Arsenic, Molybdoarsenic acid, Potatoes.

1494-67
THE EFFECT OF HUMIDITY ON THE VOLATIZATION OF CERTAIN INSECTICIDES.
W F Lyon R W Davidson
J Econ Entom 58(5):1037
Oct 1965 421 J822
Humidity, Insecticides, Volatization.

1495-67
AN IMPROVED COLORIMETRIC METHOD FOR DETERMINING ENDOSULFAN (THIODAN) RESIDUES IN VEGETABLES AND 8EEF FAT.
J C Maitlen K Walker W E Westlake
J Agr Food Ch 11(5):416-418
Sep 1963 381 J8223
Colorimetry, Endosulfan, Insecticide residues.

55 1496-67

1496-67
HERBICIDE DETERMINATION:A NEW BASIC PROCEDURE FOR DETERMINING PHENOXY ACID HERBICIDES IN AGRICULTURAL PRODUCTS.
R P Marquardt E N Luce
J Agr Food Ch 9(4):266-270
Jul I96I 3BI JB223
Agricultural products, Herbicides, Phenoxy acid.

1497-67
DETERMINATION OF RESIDUAL 4-DIMETHYLAMINO-3,5-XYLYL METHYLCARBAMATE AND 4-DIMETHYLAMINO-3,5-XYLENOL BY USE OF LUTEOARSENOTUNGSTIC ACID.
R P Marquardt E N Luce
J Agr Food Ch II(5):4IB-422, TABS.
Sep I963 3BI JB223
Insecticide residues, Luteoarsenotungstic acid, 4-dimethyl-amino-3,5-xylyl methylcarbamate, 4-dimethylamino-3,5-xylenol.

1498-67
PESTICIDES AND FOOD FLAVOR:INFLUENCE OF HERBICIDES ON FLAVOR OF PROCESSED FRUITS AND VEGETABLES.
F J McArdle A N Maretzki R C Wiley M G Modrey
J Agr Food Ch 9(3):22B-230
May I96I 3BI JB223
Food flavor, Fruit, Vegetables.

1499-67
SEVIN RESIDUES IN POULTRY PRODUCTS.
C F McCay B W Arthur
J Econ Entom 55(6):936-93B, TABS.
Dec I962 42I JB22
Carbaryl, Insecticides, Poultry, Residues.

1500-67
EFFECT OF ENVIRONMENTAL FACTORS ON PHOSPHAMIDON DEGRADATION.
R E Menzer L P Ditman
J Agr Food Ch II(2):I70-173
Mar I963 3BI JB223
Environment, Insecticide residues, Phosphamidon.

1501-67
INSECTICIDE RESIDUES IN MEAT AND MILK: DETERMINATION OF HEPTACHLOR EPOXIDE IN FAT AND MILK.
C F Meyer M A Maiina P B Polen
J Agr Food Ch B(3):IB3-IB6, FIGS
May I960 3BI JB223
Fats, Heptachior epoxide, Insecticide residues, Meat, Milk.

1502-67
A COLORIMETRIC PROCEDURE FOR THE MICRODETERMINATION OF SULFONAMIDES IN ANIMAL TISSUES.
R P Mooney N R Pasareia
J Agr Food Ch 12(2):I23-I27, TABS.
Mar I964 3BI JB223
Colorimetry, Drug residues, Feed additives, Sulfonamides.

1503-67
METABOLISM OF TWO FORMS OF DIETARY ARSENIC BY THE RAT.
K Morgareidge
J Agr Food Ch 1I(5):377-37B
Sep I963 3BI JB223
Arsenic, Feed additives, Metabolism, Rats.

1504-67
IDENTIFICATION OF HALOGENATED PESTICIDES BY MASS SPECTROSCOPY.
R O Mumma T R Kantner
J Econ Entom 59(2):49I-492, BIBL.
Apr I966 42I JB22
Halogens, Pesticide residues, Pesticides, Spectroscopy.

1505-67
PESTICIDES AND FOOD FLAVOR:EFFECT OF INSECTICIDES AND FUNGICIDES ON THE FLAVOR QUALITY OF FRUITS AND VEGETABLES.
E F Murphy A M Briant M L Dodds I S Fagerson
M E Kirkpatrick R C Wiley
J Agr Food Ch 9(3):214-223, TABS.
May I96I 3BI JB223
Food flavor, Fruit, Fungicides, Insecticides, Vegetables.

1506-67
INSECTICIDE RESIDUE STUDIES: DETERMINATION OF HEPTACHLOR AND HEPTACHLOR EPOXIDE IN SOILS.
R T Murphy W F Barthel
J Agr Food Ch B(6):442-445
Nov I960 3BI JB223
Heptachior, Heptachior epoxide, Insecticide residues.

1507-67
DIMETHOATE RESIDUES IN LEAFY CROPS.
K A Nelson R E Menzer L P Ditman
J Econ Entom 59(2):404-407, BIBL. 406
Apr I966 42I JB22
Dimethoate, Insecticide residues, Vegetables.

150B-67
METHOXYCHLOR IN EGGS AND CHICKEN TISSUES.
C E Olney W E Donaldson T W Kerr
J Econ Entom 55(4):477-479, TABS.
Aug I962 42I JB22
Chicks, Eggs, Insecticide residues, Methoxychlor, Tissues.

1509-67
FORCED VOLATILIZATION CLEANUP OF BUTTERFAT FOR GAS CHROMATOGRAPHIC EVALUATION OF ORGANOCHLORINE INSECTICIDE RESIDUES.
D E Ott F A Gunther
J Agr Food Ch I2(3):239-243, BIBL. 243
May I964 3BI JB223
Chromatography, Insecticide residues, Milk fat.

1510-67
METABOLIC STABILITY OF RADIOACTIVE ARSANILIC ACID IN CHICKENS.
L R Overby R L Fredrickson
J Agr Food Ch II(5):37B-3B1
Sep I963 3BI JB223
Arsanilic acid, Chicks, Feed additives, Metabolism.

1511-67
INSECTICIDE-MITICIDE RESIDUES: DETERMINATION OF TRITHION CROP RESIDUES BY CHOLINESTERASE INHIBITION MEASUREMENT.
G G Patchett G H Batcheider
J Agr Food Ch B(I):54-57, TABS.
Jan I960 3B1 JB223
Carbophenothion, Cholinesterases.

1512-67
DETERMINATION OF STRONTIUM-90 IN MILK BY AN ION EXCHANGE METHOD.
C Porter D Cahill R Schneider P Robbins W Perry B Kahn
Anal Ch 33(I0):I306-130B
Sep I96I 3BI JB25A
Ion exchange, Milk, Strontium-90.

1513-67
INSECTICIDE RESIDUES IN MILK: EXCRETION OF CO-RAL IN THE MILK OF DAIRY CATTLE.
R D Radeieff H V Ciaborn
J Agr Food Ch B(6):437-439
Nov I960 3BI JB223
Co-Ral, Dairy cattle, Insecticide residues, Milk.

1514-67
THE SIGNIFICANCE FOR THE PROCESSOR OF FEED ADDITIVE RESIDUES IN FOODS.
E E Rice
J Agr Food Ch I1(5):375-376
Sep I963 3B1 JB223
Feed additives, Food processing, Food residues.

1515-67
DISSIPATION OF DIAZINON RESIDUES IN WHEAT.
C C Roan B P Srivastava
J Econ Entom 5B(5):996-99B
Oct I965 42I JB22
Wheat.

1516-67
FACTORS CONTRIBUTING TO THE LOSS OF INSECTICIDE DEPOSITS ON CATTLE.
R H Roberts W F Chamberlain
J Econ Entom 56(5):614-6IB, TABS.
Oct I963 42I JB22
Cattle, Insecticide deposits.

1517-67
COLORIMETRIC DETERMINATION OF 2,6-DICHLORO-4-NITROANILINE IN PLANTS AND SOIL.
J Roburn
J Sci Food A I2(II):766-772
Nov I96I 3B2 SOI2
Colorimetry, Soil analysis, 2,6-dichloro-4-nitroaniline.

151B-67
RATES OF DISAPPEARANCE OF ZOLONE AND IMIDAN FROM ALFALFA.
F R Shan R A Callahan M C Miller
J Econ Entom 59(6):1524-1525
Dec 1966 42I JB22

Alfalfa, Imidan, Insecticide residues, Zolone.

1519-67
DISAPPEARANCE OF GUTHION FROM FORAGE CROPS IN MASSACHUSETTS.
F R Shaw C T Smith W J Fischang
J Econ Entom 55(5):793-794, TABS.
Oct 1962 421 J822
Azinphosmethyl, Azinphosmethyl, Forage plants,
Insecticide residues, Massachusetts.

1520-67
THE DISAPPEARANCE OF RESIDUES OF 8IDRIN FROM ALFALFA.
F R Shaw R A Callahan F R Holbrook
J Econ Entom 59(2):4B7
Apr 1966 42I J822
Alfalfa, 8idrin, Insecticide residues.

1521-67
DYLOX RESIDUES ON VEGETABLE CROPS.
H H Shorey L D Anderson T R Fukuto
J Econ Entom 56(4):532
Aug 1963 42I J822
Crops, Insecticide residues, Trichlorfon, Vegetables.

1522-67
RECOVERY OF ETHYLENE DIBROMIDE RESIDUES FROM FUMIGATED WHOLE KERNEL AND MILLED WHEAT FRACTIONS.
W 8 Sinclair D L Lindgren R Forbes
J Econ Entom 55(6):836-842, TABS.
Dec 1962 42I J822
Ethylene dibromide, Fumigation, Insecticide residues,
Milled wheat, Wheat, Whole kernel wheat.

1523-67
FEED ADDITIVE RESIDUES:DETERMINATION OF 3,5-DINITRO-O-TOLUAMIDE (ZOALENE) IN CHICKEN TISSUES.
G N Smith B J Theigs M G Swank
J Agr Food Ch 9(3):197-201
May I961 38I J8223
Chickens, Feed additives, Zoalene.

1524-67
PESTICIDE RESIDUES:MODIFIED AND IMPROVED PROCEDURE FOR SCHONIGER TOTAL CHLORINE RESIDUE ANALYSIS.
L E St. John Jr D J Lisk
J Agr Food Ch 9(6):468
Nov 1961 38I J8223
Insecticide residues, Pesticides, Quantitative analysis,
Schoniger total chlorine residue analysis.

1525-67
PERSISTANCE OF DIMETHOATE RESIDUES IN HEMLOCK TREATED FOR HEMLOCK FIORINIA SCALE AS DETERMINED 8Y OXYGEN FLASK COMBUSTION.
L E St. John Jr W E Wallner J A Weidhaas Jr D J Lisk
J Econ Entom 57(I):I03-I05
Feb 1964 42I J822
Dimethoate, Fiorinia externa, Insecticide residues, Tsuga.

1527-67
FUNGICIDE RESIDUES: COLORIMETRIC ESTIMATION OF DODECYLGUANIDINE ACETATE RESIDUES.
W A Steller K Klotsas E J Kuchar M V Norris
J Agr Food Ch 8(6):460-464, TABS.
Nov I960 38I J8223
Colorimetry, Dodecylguanidine acetate, Fungicide residues.

1528-67
BIOLOGICAL ASSAY OF INSECTICIDES USING THE BRINE SHRIMP, ARTEMIA SALINA (L).
J H Stevenson
J Sci Food A I2(9):650-652
Sep 1961 382 SOI2
Artemia salina (L), Biological assay, Brine shrimp,
Insecticides.

1529-67
DETERMINATION OF TRACE AMOUNTS OF NITROFURAZONE IN MILK.
L R Stone
J Agr Food Ch I2(2):I2I-I23
Mar I964 38I J8223
Drug residues, Feed additives, Milk, Nitrofurazone.

1530-67
FEED ADDITIVE RESIDUES:DETERMINATION OF 3-AMINO-5-NITRO-O-TOLUAMIDE (ANOT) IN CHICKEN TISSUES.
B J Thiegs G N Smith J L Bevirt
J Agr Food Ch 9(3):201-204
May 196I 38I J8223
Chickens, Feed additives, ANOT .

1531-67
DETERMINATION OF RESIDUAL BROMIDE IN CACAO SHELL AND NIB.
A Turner
J Sci Food A I5(4):265-268
Apr 1964 382 SOI2
Bromides, Cacao.

1532-67
PHORATE RESIDUES IN TOMATO FRUIT AND FOLIAGE.
C H Van Middelem R M Baranowski
J Econ Entom 55(5):600-603, TABS.
Oct I962 421 J822
Insecticide residues, Phorate, Tomatoes.

1533-67
INSECTICIDE RESIDUES: TOXAPHENE RESIDUES ON PANGOLAGRASS.
C H Van Middelem W G Genung E G Kelsheimer L C Kuitert
J Agr Food Ch 8(4):289-292, TABS.
Jul I960 38I J8223
Digitaria decumbens, Insecticide residues, Toxaphene.

1535-67
MORTALITY OF BUMBLE BEES IN COMMERCIAL LOW-BUSH BLUEBERRY FIELDS DUSTED WITH CALCIUM ARSENATE.
G A Wood F A Wood
J Econ Entom 55(4):537-539
Aug I962 42I J822
Blueberries, Bombus, Bombus, Calcium arsenate, Mortality.

1536-67
HERBICIDE RESIDUES: COLORIMETRIC MICRODETERMINATION OF I-CHLORO-2-NITROBENZENE IN PINEAPPLE.
H Y Young
J Agr Food Ch 8(3):213-214, TABS.
May 1960 381 J8223
Colorimetry, Herbicide residues, Microanalysis, Pineapples,
I-chloro-2-nitrobenzene.

1537-67
RESIDUE DETERMINATION OF NAPHTHALENEACETIC ACID IN OLIVES.
G Zweig D L Gutnick R Gulli T E Archer H T Hartmann
J Agr Food Ch I2(1):59-6I
Jan I964 381 J8223
Naphthaleneacetic acid, Olives, Olives,
Plant growth regulator, Thinning (fruit).

1538-67
INSECTIDE RESIDUES: RESIDUE ANALYSIS OF A CHLORINATED INSECTICIDE (THIODAN) BY COMBINATION OF GAS CHROMATOGRAPHY AND INFRARED SPECTROPHOTOMETRY.
G Zweig T E Archer D. Rubenstein
J Agr Food Ch 8(5):403-405
Sep I960 381 J8223
Chromatography, Endosulfan, Insecticide residues,
Spectrophotometry.

60 TOXICOLOGY

1539-67
LOW CALORIC VALUE OF CAROBS AS THE POSSIBLE CAUSE OF GROWTH DEPRESSION IN CHICKS.
E Aiumot E Wachtomi S Bornstein
J Sci Food A 15(4):259-265
Apr 1964 3B2 S012
Calorific value, Chicks, Growth factors.

1540-67
TOXICOLOGIC STUDIES ON PYRETHRIN-TYPE ESTERS OF CHRYSANTHEMUMIC ACID. I. CHRYSANTHEMUMIC ACID, 6-CHLOROPIPERONYL ESTER (BARTHRIN).
A M Ambrose
Toxicol Appl Pharmac 5:414-426
1963 391.B T662
Barthrin, Chrysanthemumic acid, Esters, Pyrethrum.

1541-67
TOXICOLOGIC STUDIES ON ARMAZIDE.
H J Antonides P Chacharonis
Toxicol Appl Pharmac 4(1):44-54
Jan 1962 391.B T662
Algicides, Armazide.

1542-67
THE CONTROL OF MITES ON DECIDUOUS FRUIT CROPS WITH BINAPACRYL.
R O Arias I A Rammer E A Kurtz S R Siemer
J Econ Entom 57(1):116-119, BIBL., TABS.
Feb 1964 421 JB22
Binapacryl, Fruit, Mites.

1543-67
MYCOTOXINS II. THE BIOLOGICAL ASSAY OF AFLATOXIN IN PEKING WHITE DUCKLINGS.
B H Armbrecht O G Fitzhugh
Toxicol Appl Pharmac 6(4):421-425, BIBL. (425-426).
Jul 1964 391.B T662
Aflatoxin, Biological assay, Mycotoxicosis, Pekin ducks.

1544-67
DDT- METABOLISM AND EXCRETION IN COLEOMEGILLA MACULATA DE GEER.
Y H Atallah W C Nettles Jr
J Econ Entom 59(3):560-564
Jun 1966 421 JB22
Coleomegilla maculata, DDT , Excreta, Metabolism.

1545-67
TOXICITY OF SEVERAL INSECTICIDES TO THE ADULT ALFALFA SEED CHALCID IN LABORATORY TESTS.
O G Bacon W D Riley
J Econ Entom 56(4):542-543
Aug 1963 421 JB22
Alfalfa seed chalcid, Bruchophagus roddi (Gussakovsky), Insecticides, Toxicology.

1546-67
EFFECT OF FORMULATION ON TOXICITY TO PLANTS AND INSECTS OF SOME SYSTEMIC INSECTICIDAL SEED DRESSINGS.
R Bardner
J Sci Food A 11(12):736-744, TABS.
Dec 1960 3B2 S012
Seed dressings, Systemic insecticides, Toxicology.

1547-67
SPECIFICITY OF CARBAMATE INDUCED ESTERASE INHIBITION IN MICE.
R L Baron J L Casterline Jr O G Fitzhugh
Toxicol Appl Pharmac 6(4):402-410, TABS
Jul 1964 391.B T662
Carbamates, Esterases, Mice.

1548-67
TOXICITY AND ACCEPTANCE OF SOME PESTICIDES FED TO PARASITIC HYMENOPTERA AND PREDATORY COCCINELLIDS.
B R Bartlett
J Econ Entom 59(5):1142-1149
Oct 1966 421 JB22
Coccinellids, Hymenoptera, Parasitic insects, Pesticides.

1549-67
TOXICITY OF SOME PESTICIDES TO EGGS, LARVAE, AND ADULTS OF THE GREEN LACEWING, CHRYSOPA CARNEA.
B R Bartlett
J Econ Entom 57(3):366-369, BIBL.
Jun 1964 421 JB22
Adults, Chrysopa carnea, Green lacewing, Insect eggs, Larvae, Pesticides, Toxicology.

1550-67
THE CONTROL OF RIPERSIA ORYZAE GREEN, A MEALYBUG OF THE PADDY PLANT IN WEST BENGAL.
A C Basu S N Banerjee
J Econ Entom 58(4):621-623
Aug 1965 421 JB22
Carbophenothion, Pseudococcidae, Pseudococcidae, Rice, Ripersia oryzae Green.

1551-67
BENZENE HEXACHLORIDE EMULSION AS A SUMMER CONTROL OF THE SOUTHERN PINE BEETLE.
W H Bennett L S Pickard
J Econ Entom 59(2):484
Apr 1966 421 JB22
Benzene hexachloride, Dendroctonus frontalis.

1552-67
INHIBITION OF CHOLINESTERASE AND ALI-ESTERASE IN PARATHION AND PARAOXON POISONING IN THE HOUSE FLY.
W C Bigley
J Econ Entom 59(1):60-65
Feb 1966 421 JB22
Aliphatic esterases, Cholinesterases, Musca domestica, Musca domestica, Paraoxon, Parathion, Toxicology.

1553-67
DETERMINATION OF FALLOUT CESIUM-137 IN ANIMAL AND PLANT TISSUES.
C Blincoe
J Agr Food Ch 9(2):127-129
Mar 1961 3B1 JB223
Cesium isotopes, Cesium-137, Plant contamination, Radioactive contamination.

1554-67
EFFECTIVENESS OF INSECTICIDES FOR CONTROL OF THE LESSER PEACH TREE BORER.
M L Bobb
J Econ Entom 59(4):971-973 PL.
Aug 1966 421 JB22
Insecticides, Synanthedon pictipes, Synanthedon pictipes.

1555-67
EVALUATION OF SOIL INSECTICIDE TREATMENTS FOR CONTROL OF CYCLODIENE-RESISTANT SOUTHERN CORN ROOTWORMS.
G M Boush M W Alexander
J Econ Entom 57(4):465-468
Aug 1964 421 JB22
Cyclodiene, Diabrotica undecimpunctata howardi, Diabrotica undecimpunctata howardi Barber, Insecticide resistant insects, Soil insecticides.

1556-67
BIOLOGICAL AND CHEMICAL PROPERTIES OF DIMETHOATE AND RELATED DERIVATIVES.
U E Brady Jr B W Arthur
J Econ Entom 56(4):477-482, BIBL., 4B2, TABS
Aug 1963 421 JB22
Biochemistry, Dimethoate.

1557-67
PYRETHRUM REACTION AEROSOL.
H G Bremer
J Econ Entom 57(1):62-67, TABS.
Feb 1964 421 JB22
Insecticidal aerosols, Pyrethrum.

1558-67
STUDIES ON THE CHRONIC TOXICITY OF PRO-NOXFISH, A PROPRIETARY SYNERGIZED ROTENONE FISH-TOXICANT.
I C Brooks R W Price
Toxicol Appl Pharmac 3(1):49-56
Jan 1961 391.B T662
Fish poisons, Pro-noxfish, Rotenone.

1559-67
MECHANISMS OF FUNGITOXIC ACTION OF N-DODECYLGUANIDINE ACETATE.
I F 8rown H D Sisler
Phytopatholo 50(11):830-839
Nov 1960 464.8 P56
Fungicides, N-dodecylguanidine acetate.

1S60-67
LA8ORATORY AND GREENHOUSE EXPERIMENTS WITH A NEW SERIES OF SYSTEMIC INSECTICIDES.
D L 8ull D A Lindquist V S House
J Econ Entom 57(1):112-116, TA8S.
Feb 1964 421 J822
Anthonomus grandis 8oheman, Systemic insecticides.

1561-67
SYNERGISM OF ORGANOPHOSPHORUS SYSTEMIC INSECTICIDES.
D L 8ull D A Lindquist V S House
J Econ Entom S8(6):11S7-1159
Dec 1965 421 J822
Insecticide synergists, Organophosphorus.

1S62-67
GROWTH, REPRODUCTION, MORTALITY, AND PATHOLOGIC CHANGES IN RATS FED GAMMA IRRADIATED POTATOES.
C H 8urns G D Abrams L E 8rownell
Toxicol Appl Pharmac 2(1):111-131, TA8S.
Jan 1960 391.8 T662
Animal morphology, Animal mortality, Animal physiology, Gamma rays, Irradiated food, Potatoes, Rats.

1S63-67
RADIONUCLIDES IN MILK.
J E Campbell G K Murthy C P Straub K H Lewis J G Terrill
J Agr Food Ch 9(2):117-122, TA8S.
Mar 1961 381 J8223
Food contamination, Milk, Milk analysis, Radionuclides.

1S64-67
A ONE-YEAR STUDY OF THE TOXICITY OF ETHAM8UTOL IN DOGS: RESULTS OF GROSS AND HISTOPATHOLOGIC EXAMINATIONS.
V P Cappiello W M Layton Jr
Toxicol Appl Pharmac 7(6):844-849
Nov 196S 391.8 T662
Dogs, Ethambutol, Histopathology, Toxicology.

1S65-67
HER8ICIDE TOXICITY:MAMMALIAN TOXICITY OF SESONE HER8ICIDE.
C P Carpenter C S Weil H F Smyth Jr.
J Agr Food Ch 9(5):382-38S
Sep 1961 381 J8223
Herbicides, Sesone, Toxicology.

1S66-67
MAMMALIAN TOXICITY OF 1-NAPHTHYL-N-METHYLCAR8AMATE (SEVIN INSECTICIDE.
C P Carpenter C S Weil P E Palm M W Woodside J H Nair III
J Agr Food Ch 9(1):30-39, 8I8L. 39
Jan 1961 381 J8223
Carbaryl.

1S67-67
A STUDY OF THE DERMAL TREATMENT OF A STEER WITH C14-LA8ELED IMIDAN.
W F Chamberlain
J Econ Entom S8(1):51-55
Feb 196S 421 J822
8eef cattle, Hypoderma lineatum (deVillers), Imidan, Insecticide application, Labeling.

1S68-67
STRUCTURE-ACTIVITY RELATIONSHIPS IN ANALOGS OF TEPA AND HEMPA.
S C Chang A 8 8orkovec
J Econ Entom S9(6):13S9-1362
Dec 1966 421 J822
Chemosterilants, Hempa, Musca domestica, Tepa.

1S69-67
EFFECT OF SESAMEX ON TOXICITIES OF INDIVIDUAL PYRETHRINS.
S C Chang C W Kearns
J Econ Entom SS(6):919-922
Dec 1962 421 J822
Pyrethrum, Sesamex, Toxicology.

1570-67
8ARK 8EETLE MORTALITY IN TREES INJECTED WITH CACODYLIC ACID (HER8ICIDE).
J F Chansler D A Pierce
J Econ Entom 59(6):1357-13S9
Dec 1966 421 J822
Cacodylic acid, Dendroctonus adjunctus, Dendroctonus obesus, Dendroctonus ponderosae, Dendroctonus pseudotsugae, Herbicides, Scolytidae.

1571-67
GOSSYPOL EXTRACTANTS: ORAL TOXICITY TO POULTRY OF A COMMERCIAL OCTYLAMINE.
S P Clark R T Du8ose
J Agr Food Ch 8(2):147-1S1, TA8S.
Mar 1960 381 J8223
Amines, Armeen 8D, Gossypol, Octylamine, Poultry, Toxicology.

1S72-67
8IOLOGICAL EFFECTS OF SR90 IN MINIATURE SWINE.
W J Clarke
Amer Coll Vet Toxicol Pr 31-36
1960 391.9 AM3
SR90 , Radiobiology, Swine.

1573-67
INSECTICIDE EFFECTS ON ANIMALS:RESPONSE OF EXPERIMENTAL ANIMALS TO PHOSDRIN INSECTICIDE IN THEIR DAILY DIETS.
F P Cleveland J F Treon
J Agr Food Ch 9(6):484-488, 8I8L. 488
Nov 1961 381 J8223
Animal nutrition, Mevinphos.

1S74-67
A HOST-PARASITE SYSTEM FOR TESTING SYSTEMIC INSECTICIDES.
C M Clifford
J Econ Entom S9(3):738-740
Jun 1966 421 J822
Parasitism, Systemic insecticides.

1575-67
APPROACHES TO MECHANISMS OF INSECTICIDAL ACTION.
E H Colhoun
J Agr Food Ch 8(4):2S2-2S7, 8I8L. 2S7, TA8S.
Jul 1960 381 J8223
Insecticides.

1576-67
LA8ORATORY EVALUATION OF VERTAIN CHEMOSTERILANTS AGAINST THE GYPSY MOTH.
C W Collier J E Downey
J Econ Entom S8(4):649-6S1
Aug 1965 421 J822
Chemosterilants, Porthetria dispar, Porthetria dispar (L).

1S77-67
FURTHER AIRPLANE SPRAY TESTS WITH CAR8ARYL AGAINST GYPSY MOTH IN NEW YORK.
D P Connola J J Homiak R C Sweet
J Econ Entom 59(5):1225-1226
Oct 1966 421 J822
Aircraft disinfestation, Carbaryl, New York, Porthetria dispar, Porthetria dispar (L.).

1S78-67
LA8ORATORY TESTS WITH 8IDRIN INSECTICIDE.
R A Corey
J Econ Entom 58(1):112-114
Feb 1965 421 J822
8idrin, Chromaphis juglandicola, Chromaphis juglandicola (Kaltenbach), Epilachna varitelarius Mulsant, Epilachna varivestis, Erythroneura comes, Erythroneura comes (Say), Tetranychus telarius, Tetranychus urticae.

1S79-67
LA8ORATORY AND FIELD EVALUATION OF SD 9129 AS AN INSECTICIDE.
R A Corey W C Moye W E Hall
J Econ Entom 58(4):6S8-660, TA8S.
Aug 1965 421 J822
Insecticides, SD 9129, Lepidoptera.

1S80-67
PESTICIDE RESIDUE ANALYSIS: MICROCOULOMETRIC GAS CHROMATOGRAPHY OF PESTICIDES.
D M Coulson L A Cavanagh J E De Vries 8 Walther
J Agr Food Ch 8(5):399-402, TA8S.
Sep 1960 381 J8223
Chromatography, Coulometers, Pesticide residues, Pesticides.

60 1581-67

1581-67
TOXICITY OF INSECTICIDE RESIDUES ON GRAPE FOLIAGE TO RED-BANDED LEAF ROLLER.
J A Cox
J Econ Entom 59(2):318-322, TABS.
Apr 1966 421 J822
Argyrotaenia velutinana, Argyrotaenia velutinana (Walker), Grapes.

1582-67
STORAGE AND EXCRETION OF DDT IN STARVED RATS.
W E Dale T B Gaines W J Hayes Jr
Toxicol Appl Pharmac 4(1):89-106, TABS.
Jan 1962 391.8 T662
DDT , Rats, Starvation.

1583-67
PHYTOTOXICITY OF GAS MIXTURES: PLANT DAMAGE AND EYE IRRITATION FROM OZONE-HYDROCARBON REACTIONS.
E F Darley J T Middleton M J Garber
J Agr Food Ch 8(6):483-485
Nov 1960 381 J8223
Eye irritation, Gases, Hydrocarbons, Ozone, Plant diseases, Toxicology.

1584-67
EXPERIMENTAL INSECTICIDES APPLIED AS SPRAYS TO CONTROL THRIPS AND THE COTTON FLEAHOPPER.
J W Davis C B Cowan Jr W C Watkins Jr P D Lindgren
J Econ Entom 59(4):980-982, TABS.
Aug 1966 421 J822
Experimental insecticides, Frankliniella sp., Psallus seriatus, Psallus serlatus, Spraying, Thrips.

1585-67
FIELD EXPERIMENTS WITH INSECTICIDES ON COTTON FOR CONTROL OF THE BOLL WEEVIL, BOLLWORM, AND COTTON LEAFWORM IN 1961.
J W Davis C B Cowan Jr C R Parencia Jr
J Econ Entom 55(5):688-692
Oct 1962 421 J822
Alabama argillacea, Alabama argillacea (Huebner), Anthonomus grandis, Anthonomus grandis Boheman, Cotton, Heliothis zea, Heliothis zea (Boddie), Insecticides.

1586-67
METABOLISM, STORAGE, AND EXCRETION OF C14-ENDOSULFAN IN THE MOUSE.
P Deema E Thompson G W Ware
J Econ Entom 59(3):546-550
Jun 1966 421 J822
C14-endosulfan, Excreta, Metabolism, Mice, Storage.

1587-67
SYNERGISM AMONG ORAL CARCINOGENS II. RESULTS OF THE SIMULTANEOUS FEEDING OF BLADDER CARCINOGENS TO DOGS.
W B Deichmann T Scotti J Radomski E Bernal M Copian F Woods
Toxicol Appl Pharmac 7(5):657-666
Sep 1965 391.8 T662
Bladder, Carcinogens, Dogs, Insecticide synergists.

1588-67
A COMPARATIVE STUDY OF TOXICOLOGICAL TEST METHODS ON A POPULATION OF THE TWO-SPOTTED SPIDER MITE (TETRANYCHUS TELARIUS).
V Dittrich
J Econ Entom 55(5):644-648
Oct 1962 421 J822
Acaricides, Tetranychus telarius, Tetranychus urticae, Toxicology.

1589-67
EFFECTS OF CERTAIN INSECTICIDES ON EARTHWORMS.
C C Doane
J Econ Entom 55(3):416-418
Jun 1962 421 J822
Chemicals, Earthworms, Insecticides.

1590-67
THE STABILISING EFFECT OF PIPERONYL BUTOXIDE ON PYRETHRINS EXPOSED TO ULTRA-VIOLET LIGHT.
J M Donaldson J H Stevenson
J Sci Food A 11(7):370-373
Jul 1960 382 S012
Piperonyl butoxide, Pyrethrum, Ultraviolet rays.

1591-67
FURTHER EVALUATION OF ANIMAL SYSTEMIC INSECTICIDES, 1962.
R O Drummond
J Econ Entom 56(6):831-834, TABS.
Dec 1963 421 J822
Hypoderma, Hypoderma bovis (L.), Hypoderma lineatum (de Villers), Systemic Insecticides.

1592-67
INSECTICIDAL PROPERTIES OF SEVIN AGAINST SOME STORED-GRAIN INSECTS.
A El Khaiek H El Sebae
J Econ Entom 56(3):420-421
Jun 1963 421 J822
Carbaryl, Stored-product Insects, Toxicology.

1593-67
TEMPERATURE EFFECTS ON TOXICITY OF SYNERGIZED CARBAMATE INSECTICIDES ON HOUSE FLIES.
O Enan H T Gordon
J Econ Entom 58(3):513-516, BIBL. 515-516
Jun 1965 421 J822
Carbamates, Insecticide synergists, Musca domestica, Musca domestica L., Temperature.

1594-67
TOXICITY OF INTRAVENOUSLY INJECTED URANIUM IN GUINEA PIGS.
Daniel R Farnell
Toxicol Appl Pharmac 7(1):32-36
Jan 1965 391.8 T662
Guinea pigs, Kidneys, Toxicology.

1595-67
SOME FACTORS INFLUENCING THE OVICIDAL EFFECTIVENESS OF SATURATED PETROLEUM OILS AND SYNTHETIC ISOPARAFFINS.
B J Flori E H Smith P J Chapman
J Econ Entom 56(6):885-888
Dec 1963 421 J822
Graphollitha molesta (Busck), Oils, Ovicides, Paraffins, Petroleum.

1596-67
EFFECT OF PRE- AND POST-TREATMENT TEMPERATURES, AGE OF DEPOSIT, AND REPELLENCY ON THE TOXICITY OF KELTHANE TO THE TWO-SPOTTED MITE, TETRANYCHUS TELARIUS (L.) (ACARINA: TETRANYCHIDAE).
R W Fisher R I C Hansell
Can Entom 96(10):1307-1312
Oct 1964 421 CI6
Acarina, Dicofol, Temperature, Tetranychidae, Tetranychus telarius (L.).

1597-67
SCREENING INSECTICIDES FOR CONTROL OF THE ADULT PERIODICAL CICADA.
H Y Forsythe Jr
J Econ Entom 59(6):1413-1416
Dec 1966 421 J822
Insecticides, Magicicada septendecim, Magicicada septendecim.

1598-67
SYMPOSIUM ON RADIOACTIVE FALLOUT IN RELATION TO FOODS.
E B Fowler
J Agr Food Ch 9(2):90
Mar 1961 381 J8223
Food analysis, Radioactive contamination.

1599-67
TOXICOLOGIC INVESTIGATIONS OF DELNAV.
J P Frawley R Weir T Tusing K P Dubois J C Calandra
Toxicol Appl Pharmac 5:605-624
1963 391.8 T662
Dioxathion, Toxicology.

1600-67
THE SYNERGISM OF SUBSTITUTED PHENYL N-METHYLCARBAMATES BY PIPERONYL BUTOXIDE.
T R Fukuto R L Metcalf M Y Winton P A Roberts
J Econ Entom 55(3):341-345, TABS.
Jun 1962 421 J822
Musca domestica, Musca domestica, Phenyl N-methylcarbamates, Piperonyl butoxide, Toxicology.

1601-67
ETHYLENE OXIDE AS A FUMIGANT AGAINST INSECTS.
R A Fulton A H Yeomans W N Sullivan
J Econ Entom 56(6):906
Dec 1963 421 J822
Ethylene oxide.

1602-67
THE ACUTE TOXICITY OF PESTICIDES TO RATS.
T B Gaines
Toxicol Appl Pharmac 2(1):88-99

Jan 1960 391.8 T662
Pesticides, Rats, Toxicology.

1603-67
MENAZON AS A SYSTEMIC INSECTICIDE IN CATTLE.
R L Goulding
J Econ Entom 55(5):577-579, TABS.
Oct 1962 421 JB22
Cattle, Menazon.

1604-67
FIELD TESTS WITH NEW INSECTICIDES FOR CONTROL OF ALFAFA WEEVIL LARVAE IN WESTERN NERASKA.
A F Hagen
J Econ Entom 55(4):574-575
Aug 1962 421 JB22
Hypera postica, Hypera postica (Gyllenhal), Insecticides, Larvae.

1605-67
TEST OF ATTRACTANTS FOR THE PALM WEEVIL.
A C Hagley
J Econ Entom 58(5):1002-1003
Oct 1965 421 J822
Attractants, Palmae, Rhynchophorus palmarum.

1606-67
MECHANISM OF DETOXICATION AND SYNERGISM OF BIDRIN INSECTICIDE IN HOUSE FLIES AND SOIL.
W E Hall
J Econ Entom 58(5):845-849
Oct 1965 421 JB22
Bidrin, Diptera, Musca domestica, Soil fumigation.

1607-67
THE YOUDEN SQUARE AS AN EXPERIMENTAL DESIGN FOR THE FIELD EVALUATION OF BOLL WEEVIL INSECTICIDES.
R L Hanna J K Walker Jr
J Econ Entom 56(5):586-588
Oct 1963 421 J822
Anthonomus grandis, Anthonomus grandis Boheman, Insecticides, Youden Square.

1608-67
EFFECTS OF APHOLATE ON A RESTRICTED POPULATION OF HOUSE FLIES.
E J Hansens P Granett
J Econ Entom 58(1):157-158
Feb 1965 421 JB22
Apholate, Musca domestica, Musca domestica.

1609-67
LARVICIDE TESTS WITH COLONY-REARED CULICOIDES VARIIPENNIS.
R L Harris R H Jones
J Econ Entom 55(4):575-576
Aug 1962 421 J822
Culicoides variipennis (Coquillett), Insect rearing, Larvicides.

1610-67
STIMULATORY EFFECTS OF CHLORDANE ON HEPATIC MICROSOMAL DRUG METABOLISM IN THE RAT.
L Hart R W Shultice J R Fouts
Toxicol Appl Pharmac 5:371-386
1963 391.8 T662
Chlordane, Microsomes, Rats, Stimulants.

1611-67
CONCENTRATION OF DDT IN BRAIN AND OTHER TISSUES IN RELATION TO SYMPTOMATOLOGY.
W J Hayes Jr W E Dale
Toxicol Appl Pharmac 6(3):349
May 1964 391.8 T662
Brain, DDT , Rats, Symptomatology, Tissues.

1612-67
OBSERVATIONS ON THE BIOLOGY OF THE SOUTHERN CORN ROOTWORM AND INSECTICIDAL TESTS FOR ITS CONTROL ON PEANUTS IN GEORGIA.
S Hays L Morgan
J Econ Entom 58(4):637-642, TABS.
Aug 1965 421 J822
Diabrotica undecimpunctata howardi,
Diabrotica undecimpunctata howardi Barber, Georgia, Insecticides, Peanuts.

1613-67
EFFECTIVENESS OF INSECTICIDES AGAINST THE SORGHUM WEBWORM IN SORGHUM HEADS.
C F Henderson J H Hatchett H G Kinzer
J Econ Entom 56(4):483-484
Aug 1963 421 JB22
Azinphosmethyl, Carbaryl, Celama sorghiella,
Celama sorghiella (Riley), Disulfoton, Mevinphos, Parathion, Sorghum.

1614-67
EFFECTIVENESS OF INSECTICIDES AGAINST THE CORN LEAF APHID IN SORGHUM WHORLS.
C F Henderson J H Hatchett H G Kinzer
J Econ Entom 57(1):22-23
Feb 1964 421 J822
Insecticides, Rhopalosiphum maidis, Rhopalosiphum maidis, Sorghum.

1615-67
EFFECTS OF SOME CHEMOSTERILANTS ON THE VIABILITY OF EGGS, FECUNDITY, MORTALITY, AND MATING OF THE CABBAGE LOOPER.
T J Henneberry A N Kishaba
J Econ Entom 59(1):156-159
Feb 1966 421 J822
Chemosterilants, Fertility, Insect eggs, Mating habits, Mortality, Trichoplusia ni, Trichoplusia ni (Hubner).

1616-67
SYMPOSIUM ON THE MECHANISM OF ACTION OF PESTICIDE CHEMICALS.
D J Hennessy
J Agr Food Ch 8(4):252
Jul 1960 381 JB223
Pesticides, Toxicology.

1617-67
LABORATORY TRIALS OF SIX POLYBUTENE EMULSIONS AGAINST THE TWO-SPOTTED SPIDER MITE.
D H C Herne
J Econ Entom 55(6):845-848, TABS.
Dec 1962 421 J822
Emulsions, Polybutenes, Tetranychus telarius,
Tetranychus urticae, Toxicology.

1618-67
SALT INJURY TO TREES.
F W Holmes
Phytopatholo 50(4):240
Apr 1960 464.8 P56
Calcium chloride, Salts, Sodium chloride, Tree injuries.

1619-67
EVALUATION OF THREE ALTERNATIVE INSECTICIDES FOR CONTROL OF GRASSHOPPERS IN ALBERTA.
N D Holmes D S Smith S McDonald G E Swailes L K Peterson
J Econ Entom 58(1):77-79
Feb 1965 421 J822
Alberta, Grasshoppers, Insect control, Insecticides.

1620-67
MODE OF ACTION OF DIPYRIDYL QUATERNARY SALTS AS HERBICIDES.
R F Homer G C Mees T E Tomlinson
J Sci Food A 11(6):309-315, TABS.
Jun 1960 382 S012
Dipyridyl, Herbicides, Quaternary salts.

1621-67
THE EFFECT OF SOME FUNGICIDES ON THE FLAVOR OF CANNED STRAWBERRIES.
G W Hope
J Agr Food Ch 12(2):189-191
Mar 1964 381 JB223
Canned food, Food flavor, Fungicides, Strawberries.

1622-67
EVALUATION OF NEW INSECTICIDES FOR CONTROL OF ONION THRIPS.
A F Howland J Wilcox
J Econ Entom 59(4):969-971
Aug 1966 421 J822
Insecticides, Thrips tabaci, Thrips tabaci.

1623-67
RESULTS OF CAGE EXPERIMENTS WITH STERILE MALE RELEASES AND A CHEMOSTERILANT TECHNIQUE FOR CONTROL OF CABBAGE LOOPER POPULATIONS.
A F Howland P Vail T J Henneberry
J Econ Entom 59(1):194-196
Feb 1966 421 J822
Chemosterilants, Insect cages, Sterile males,
Trichoplusia ni, Trichoplusia ni (Hubner).

1624-67
TOXIC EFFECTS OF HEXACHLORONAPHTHALENE ON SWINE.
W G Huber R P Link
Toxicol Appl Pharmac 4(2):257-262
Mar 1962 391.8 T662
Hexachloronaphthalene, Hyperkeratosis, Swine.

1625-67
HERBICIDAL ACTIVITY: MOLECULAR SIZE VS. HERBICIDAL ACTIVITY OF ANILIDES.
C W Huffman S E Allen
J Agr Food Ch 8(4):298-302, BIBL. 302, TABS.
Jul 1960 381 J8223
Anilides, Molecular size.

1626-67
EFFECTS OF DDT, AS USED IN BLACK FLY LARVAL CONTROL, ON STREAM ARTHROPODS.
H Jamnback H S Eabry
J Econ Entom 53(5):636-639, TABS.
Oct 1962 421 J822
Arthropoda, DDT , Larvae, Simuliidae, Simuliidae.

1627-67
CONTROL OF THRIPS AND APHIDS ON CARNATIONS WITH SYSTEMIC INSECTICIDES.
R N Jefferson F S Morishita S T Besemer W A Humphrey
J Econ Entom 57(3):357-360,
Jun 1964 421 J822
Dianthus caryophyllus, Dianthus caryophyllus,
Frankliniella sp., Myzus persicae, Systemic insecticides,
Thrips.

1628-67
CHEMICAL STRUCTURE AND TOXICITY OF SOME CARBAMOYLOXY PHOSPHORODITHIOATES TO SUSCEPTIBLE AND ORGANOPHOSPHORUS-RESISTANT STRAINS OF MITES.
L R Jepson M J Jesser J O Complin
J Econ Entom 59(1):185-187
Feb 1966 421 J822
Carbamoyloxy phosphorodithoates,
Insecticide resistant insects, Mites, Organophosphorus,
Panonychus citri (McGregor),
Tetranychus pacificus McGregor, Toxicity.

1629-67
TESTS OF GUTHION FOR THE CONTROL OF THE DOUGLAS-FIR CONE MIDGE.
N E Johnson
J Econ Entom 55(5):613-616
Oct 1962 421 J822
Azinphosmethyl, Azinphosmethyl,
Contarinia oregonensis Foote, Douglas-fir cone midge.

1630-67
A TEST OF SYSTEMIC INSECTICIDES TJ CONTROL DOUGLAS-FIR CONE AND SEED INSECTS.
N E Johnson J H Rediske
J Econ Entom 58(5):1020-1021
Oct 1965 421 J822
Insecticides, Insects, Pseudotsuga menziesii, Seed insects.

1631-67
THE EFFECTS OF VARIOUS CHEMICALS ON EGGS OF THE YELLOW-FEVER MOSQUITO, AEDES AEGYPTI.
C L Judson Y Hokama A D Bray
J Econ Entom 55(5):805-807
Oct 1962 421 J822
Aedes aegypti, Chemicals, Culicidae, Insect eggs.

1632-67
TOXICITY OF THE DIALYZABLE FRACTION OF THE VENOM OF THE YELLOW SCORPION, LEIRUS QUINQUESTRIATUS, TO THE MIGRATORY LOCUST.
E Kamon
Toxic 2(4):255-259
May 1965 391.8 T66
Dialysis, Leirus quinquestriatus, Melanoplus sanguinipes,
Melanoplus sanguinipes, Toxicology, Venoms, Yellow scorpion.

1633-67
EFFECTIVENESS OF SEVEN ORGANOPHOSPHORUS COMPOUNDS AS SPACE APPLICATIONS AGAINST MUSCA DOMESTICA.
J W Kilpatrick H F Schoof
J Econ Entom 56(5):560-563, TABS.
Oct 1963 421 J822
Insecticide application, Musca domestica L.,
Organic compounds, Phosphorus compounds.

1634-67
HORN FLY AND FACE FLY CONTROL STUDIES WITH DOW M-1816. .
F W Knapp
J Econ Entom 55(5):816-817
Oct 1962 421 J822
Dow M-1816, Haematobia irritans, Haematobia irritans (L.),
Musca autumnalis, Musca autumnalis De Geer, Toxicology.

1635-67
CHRONIC TOXICOLOGIC STUDIES ON ISOPROPYL N-(3-CHLOROPHENYL) CARBAMATE (CIPC) .
P S Larson E M Crawford B R Smith Jr G R Hennigar H B Haag
Toxicol Appl Pharmac 2(6):659-673
Nov 1960 391.8 T662
Isopropyl N-(3-Chlorophenyl) carbamate, CIPC , Toxicology.

1636-67
CONTROL OF HOUSE FLIES IN OUTDOOR PRIVIES WITH LARVICIDES.
G C LaBrecque M C Evers D W Meifert
J Econ Entom 59(1):245
Feb 1966 421 J822
Larvicides, Musca domestica, Musca domestica L., Privies.

1637-67
LABORATORY TESTS OF INSECTICIDES ON MOSQUITO LARVAE IN POLLUTED AND TAP WATER.
L L Lewallen W H Wilder
J Econ Entom 56(6):834-835
Dec 1963 421 J822
Culex pipiens quinquefasciatus Say, Culicidae, Insecticides,
Larvae, Water treatment.

1638-67
AN EVALUATION OF SEVERAL INSECTICIDES AGAINST PESTS OF BROCCOLI.
M F Littleford L P Ditman
J Econ Entom 56(6):766-767
Dec 1963 421 J822
Brevicoryne brassicae (L.), Broccoli, Insect pests,
Insecticides, Plutella maculipennis (Curtis),
Trichoplusia ni (Hubner).

1639-67
IMPORTED FIRE ANT TOXIC BAIT STUDIES: GC-1283, A PROMISING TOXICANT.
C S Lofgren C E Stringer F J Bartlett
J Econ Entom 55(3):405-407, TABS.
Jun 1962 421 J822
Baits, GC-1283, Solenopsis saevissima richteri,
Solenopsis saevissima richteri, Toxicology.

1640-67
COTTON-PLANT PIGMENT AS A SOURCE OF RESISTANCE TO THE BOLLWORM AND TOBACCO BUDWORM.
M J Lukefahr D F Martin
J Econ Entom 59(1):176-179
Feb 1966 421 J822
Cotton, Heliothis virescens, Heliothis virescens,
Heliothis zea, Heliothis zea (Boddie), Pigments,
Upland cotton.

1641-67
SPRAY DEPOSIT ON OIL-SENSITIVE CARDS AND SPRUCE BUDWORM MORTALITY.
B Maksymiuk
J Econ Entom 56(4):465-467, TABS.
Aug 1963 421 J822
Choristoneura fumiferana,
Choristoneura fumiferana (Clemens), Insecticide application,
Mortality, Spraying.

1642-67
THE EFFECT OF VARIOUS ADJUVANTS ON THE SYSTEMIC INSECTICIDAL ACTIVITY OF PHORATE AND ZECTRAN.
J W Matteson H M Taft
J Econ Entom 57(3):325-326
Jun 1964 421 J822
Phorate, Systemic insecticides, Zectran.

1643-67
ABSORPTION, EXCRETION, AND METABOLISM OF A NEW ANTIBACTERIAL AGENT, NALIDIXIC ACID.
E W McChesney E J Froelich G Y Lesher A V R Crain D Rosi
Toxicol Appl Pharmac 6(3):292-309, TABS.
May 1964 391.8 T662
Absorption (biological), Bactericides, Excreta, Metabolism,
Nalidixic acid.

1644-67
TOXICOLOGIC INVESTIGATIONS OF POLYACRYLAMIDES.
D D McCollister C L Hake S E Sadek V K Rowe
Toxicol Appl Pharmac 7(S):639-651, TA8S.
Sep 196S 39I.8 T662
Separan AP30, Separan NPI0, Toxicology.

I645-67
COMPARATIVE LETHALITY OF SEVERAL LATRODECTUS VENOMS.
J D McCrone
Toxic 2(3):20I-203
Dec I964 39I.8 T66
Latrodectus, Latrodectus mactans, Lethal factor, Venoms.

I646-67
EFFECTS OF INSECTICIDES ON THE SCORPION CENTRUROIDES VITTATUS.
T McGregor J F Flanigan
J Econ Entom 55(5):66I-662
Oct 1962 42I J822
Centruroides vittatus (Say), Insecticides, Scorpionida.

I647-67
CAR8AMATE INSECTICIDES: MULTISU8STITUTED CHLORO-AND METHYLPHENYL N-METHYLCAR8AMATES.
R L Metcalf C Fuertes-Polo T R Fukuto
J Econ Entom 56(6):862-864
Dec 1963 42I J822
Carbamates, Chloro-phenyl N-methylcarbamates, Methyl-phenyl N-methylcarbamates.

1648-67
SELECTIVE INSECTICIDAL ACTION OF ISOPROPYL PARATHION AND ANALOGUES.
R L Metcalf M Frederickson
J Econ Entom 58(I):I43-I47
Feb 196S 42I J822
Apis mellifera L, Insecticides, Isopropyl parathion, Musca domestica L.

1649-67
INSECTICIDAL CAR8AMATES:COMPARISON OF THE ACTIVITIES OF N--METHYL AND N,N-DIMETHYLCAR8AMATES OF VARIOUS PHENOLS.
R L Metcalf T R Fukuto M Y Winton
J Econ Entom 55(3):345-347
Jun 1962 42I J822
Carbamates, Insecticides, N-methylcarbamate, N-N-dimethylcarbamate, Phenols, Toxicology.

16S0-67
SILICON-CONTAINING CAR8AMATE INSECTICIDES.
R L Metcalf T R Fukuto
J Econ Entom 58(6):II5I
Dec 196S 42I J822
Carbamates, Silicon.

16S1-67
EFFECTS OF LOW DOSAGES OF INSECTICIDAL SEED-TREATMENTS ON COTTON AND COTTON INSECTS.
W J Mistric E R Mitchell
J Econ Entom 59(1):57-60
Feb 1966 42I J822
Cotton, Dosage, Insecticides, Insects, Seed treatment.

16S2-67
SIMPLE SCREENING TEST FOR SYSTEMIC APHICIDES.
T E Mittler J T Pennel
J Econ Entom S7(2):302-303
Apr 1964 42I J822
Aphididae, Systemic Insecticides.

16S3-67
TOXICOLOGY OF HYDROXYPYRIDINETHIONE.
R A Moe J Kirpan C R Linegar
Toxicol Appl Pharmac 2(2):156-170
Mar 1960 39I.8 T662
Hydroxypypidinethione., Toxicology.

16S4-67
THE EFFECT OF MANGANESE ETHYLENE 8ISDITHIOCAR8AMATE (MANE8) ON SOME CHEMICAL CONSTITUENTS OF COLLETOTRICHUM CAPSICI.
A L Morehart D F Crossan
Toxicol Appl Pharmac 4(6):720-729, 8I8L. 728-729, TA8S.
Nov I962 39I.8 T662
Colletotrichum capsici (Syd), Fungicides, Maneb.

165S-67
EVALUATION OF INSECTICIDES IN THE LA8ORATORY AGAINST ADULT AND LARVAL STA8LE FLIES.
G A Mount J 8 Gahan C S Lofgren
J Econ Entom S8(4):685-687
Aug 196S 42I J822
Adults, Insecticides, Larvae, Stomoxys calcitrans, Stomoxys calcitrans.

1656-67
FIELD EVALUATION OF ORGANOPHOSPHATE INSECTICIDES AS SOIL TREATMENTS FOR THE CONTROL OF HIPPELATES GNATS.
M Mulla
J Econ Entom 58(4):654-6S8, 8I8L. 6S7-658, TA8S.
Aug I96S 42I J822
Diptera, Hippelates collusor (Townsend), Hippelates heml Sabrosky, Insecticides, Organophosphates, Soil fumigation.

1657-67
THE EFFECT OF LATRODECTUS MACTANS TREDECIGUTTATUS VENOM ON THE ENDOGENOUS ACTIVITY OF PERIPLANETA AMERICANA NERVE CORD.
L Neri S 8ettini M Frank
Toxic 3(2):9S-99
Nov I96S 39I.8 T66
Latrodectus mactans, Latrodectus mactans tredecimguttatus, Nerves, Periplaneta americana, Venoms.

1658-67
CONTACT TOXICITY OF TEN INSECTICIDES TO ADULTS OF THE CARROT RUST FLY.
H D Niemczyk
J Econ Entom S8(3):423-42S
Jun I965 42I J822
Insecticides, Psila rosae, Psila rosae (F.).

16S9-67
UREA POISIONING OF CATTLE.
F W Oehme
Amer Coll Vet Toxicol Pr 7-II
I963 39I.9 AM3
Cattle, Feed toxicity, Urea.

1660-67
THE RELATIONSHIP 8ETWEEN THE HEMORRHAGIC AND LETHAL ACTIVITIES OF JAPANESE MAMUSHI (AGKISTRODON HALYS 8LOMHOFFIL) VENOM.
T Omori S Iwanaga T Suzuki
Toxic 2(1):1-4
Jun I964 39I.8 T66
Agkistrodon halys blomhoffii, Hemorrhage, Japanese Mamushi, Lethal factor, Muscles, Necrosis, Snake venom.

1661-67
2-(P-TERT-8UTYLPHENOXY)ISOPROPYL 2-CHLOROETHYL SULFITE (ARAMITE) I.ACUTE, SU8ACUTE, AND CHRONIC ORAL TOXICITY.
8 L Oser M Oser
Toxicol Appl Pharmac 2(4):44I-4S7
Jul I960 39I.8 T662
Aramite, Toxicology.

1662-67
TOXICOLOGIC STUDIES WITH 8RANCHED AND LINEAR ALKYL 8ENZENE SULFONATES IN RATS.
8 L Oser K Morgareidge
Toxicol Appl Pharmac 7(6):819-825
Nov I96S 39I.8 T662
8enzene, Rats, Sulfonic acids, Toxicology.

1663-67
METABOLISM OF ARSANILIC ACID. I. META8OLIC STA8ILITY OF DOU8LY LA8ELED ARSANILIC ACID IN CHICKENS.
L R Overby L Straube
Toxicol Appl Pharmac 7(6):850-854
Nov I96S 39I.8 T662
Arsanilic acid, Chicks, Metabolism.

1664-67
META8OLISM OF ARSANILIC ACID. II. LOCALIZATION AND TYPE OF ARSENIC EXCRETED AND RETAINED 8Y CHICKENS.
L R Overby R L Frederickson
Toxicol Appl Pharmac 7(6):8S5-867, 8I8L. 866-867, TA8S.
Nov I96S 39I.8 T662
Arsanilic acid, Chicks, Feed additives, Metabolism.

166S-67
CHEMOSTERILIZATION OF HOUSE FLIES FED CERTAIN ETHYLENIMINE DERIVATIVES.
J C Parish 8 W Arthur
J Econ Entom S8(4):699-702
Aug I965 42I J822
Chemosterilants, Musca domestica, Musca domestica.

1666-67
MAMMALIAN AND INSECT META8OLISM OF THE CHEMOSTERILANT THIO-TEPA.
J C Parish 8 W Arthur
J Econ Entom 58(5):976-979
Oct 1965 421 J822
Chemosterilants, Insect metabolism, Mammalian metabolism, Thiotepa.

1667-67
EFFECTS OF VENOM FROM THE SCORPION, CENTRUROIDES SCULPTURA-TUS ON THE RAT.
R A Patterson
Toxic 2(3):167-170
Dec 1964 391.8 T66
Centruroides sculpturatus, Rats, Scorpionida, Venoms.

1668-67
CONTROL OF THE NEMATODE LEIDYNEMA APPENDICULATA (LEIDY) (NEMATA: RHA8DIT1DA THELASTOMATIDAE) IN LA8ORATORY CUL-TURES OF THE AMERICAN COCKROACH.
J Pawlik
J Econ Entom 59(2):468-469
Apr 1966 421 J822
Insect hosts, Insect rearing,
Leidynema appendiculata (Leidy), Nemata: Rhabditida,
Periplaneta americana, Periplaneta americana (L.).

1669-67
CHRONIC TOXICITY OF SANTOMERSE NO.3 FROM OLEFIN (DODECYL 8ENZENE SODIUM SULFONATE).
O E Paynter R J Weir Jr
Toxicol Appl Pharmac 2(6):641-648
Nov 1960 391.8 T662
Dodecyl benzene sodium sulfonate, Olefins, Santomerse no.3, Toxicology.

1670-67
HER8ICIDE TOXICOLOGY: TOXICOLOGY OF DALAPON SODIUM (2,2-DICHLOROPROPIONIC ACID, SODIUM SALT).
O E Paynter T W Tusing D D McCollister V K Rowe
J Agr Food Ch 8(1):47-51, TA8S.
Jan 1960 381 J8223
Dalapon sodium, Herbicides, Toxicology.

1671-67
META8OLISM OF 1NSECT1CIDES 8Y VAR1OUS INSECT SPECIES.
A S Perry
J Agr Food Ch 8(4):266-272, 8I8L. 272.
Jul 1960 381 J8223
Insect metabolism, Insecticides.

1672-67
SHEEP 80T FLY CONTROL TESTS WITH DDVP.
R E Pfadt J Campbell
J Econ Entom 56(4):530-531
Aug 1963 421 J822
Dichlorvos, Oestris ovis L., Oestrus ovis, Sheep.

1673-67
THE VAPOR TOXICITY OF CERTAIN 8ROMOPROPANES TO THE GRAPE PHYLLOXERA UNDER CONTROLLED LA8ORATORY CONDITIONS.
1 A Rammer E M Stafford
J Econ Entom 55(2):203-211
Apr 1962 421 J822
8romopropanes, Phylloxera vitifoliae, Phylloxera vitifoliae, Toxicology.

1674-67
LA8ORATORY STUDY ON THE CONTACT TOXIC1TY OF DDT TO ECTRO-PIS CREPUSCULAR1A SCHIFF.
A P Randall
Can Entom 94(4):424-428
Mar 1962 421 C16
DDT , Ectropis crepuscularia Schiff, Saddle-backed looper.

1675-67
1NSECT STER1LANT EXPERIMENTS IN OUTDOOR CAGES WITH APHOLATE, METEPA, AND FOUR 81FUNCTIONAL AZ1R1D1NE CHEMICALS AGAINST THE HOUSE FLY.
R H Ratcliffe S S Ristich
J Econ Entom 58(6):1079-1082, TA8S.
Dec 1965 421 J822
Apholate, Chemosterilants, Ethylenimine, Metepa,
Musca domestic, Musca domestica.

1676-67
ENCAPSULATION AS A TECHN1QUE FOR FORMULATING MICRO8IAL AND CHEMICAL 1NSECT1CIDES.
E A Raun R D Jackson
J Econ Entom 59(3):620-622
Jun 1966 421 J822
Chemical insecticides, Encapsulation,
Microbial insecticides.

1677-67
EVALUATION OF SEVERAL 1NSECTICIDES TO CONTROL THE ONION MAGGOT.
W A Rawlins D Gonzalez
J Econ Entom 59(2):288-290, TA8S.
Apr 1966 421 J822
Hylemya antiqua, Hylemya antiqua (Meigen), Insecticides, Organophosphates.

1678-67
METHYL 88ROMIDE, SULFURYL FLUORIDE, AND OTHER FUMIGANTS AGAINST QUARANTINA8LE COCHLICELLA AND THE8A SNAILS.
H Richardson H Roth
J Econ Entom 58(4):690-693
Aug 1965 421 J822
Cochlicella barbara (L), Fumigants, Methyl bromide, Snails, Sulfuryl fluoride, Theba pisana (Muller.

1679-67
SYSTEMIC INSECTICIDES FOR CONTROL OF LYGUS HESPERUS KNIGHT ON COTTON.
R L Ridgway C G Jackson R Patana D A Lindquist 8 G Reeves
J Econ Entom 59(4):1017-1018
Aug 1966 421 J822
Cotton, Lygus hesperus (Knight), Systemic Insecticides.

1680-67
TESTS FOR 80LL WEEVIL CONTROL WITH A SYSTEMIC INSECTICIDE AND A 80LL WEEVIL FEEDING STIMULANT.
R L Ridgway S L Jones L J Gorzycki
J Econ Entom 59(1):149-153
Feb 1966 421 J822
Anthonomus grandis, Anthonomus grandis 8oheman, Feeding, Insecticides.

1681-67
EFFECTS OF ADDITIVES ON THE TOXICITY OF PYRETHRINS TO STA8LE FLIES AND HORN FLIES.
R H Roberts R L Harris O H Graham
J Econ Entom 56(5):699-702, TA8S.
Oct 1963 421 J822
Haematobia irritans (L.), Pyrethrum,
Stomoxys calcitrans (L.).

1682-67
PRELIMINARY TESTS WITH INSECTICIDES FOR THE CONTROL OF THE LITTLE 8LUE CATTLE LOUSE.
R H Roberts
J Econ Entom 57(1):42-44, PL.
Feb 1964 421 J822
Insect control, Insecticides, Little blue cattle louse, Solenopotes capillatus.

1683-67
INTRAVENTRICULAR 1NJECTION OF VENOM.
F E Russell V C 8ohr
Toxicol Appl Pharmac 4(2):165-173
Mar 1962 391.8 T662
Central nervous system, Venoms.

1684-67
PENETRATION AND META8OLISM OF DDT 1N RES1STANT AND SUSCEPTI8LE HOUSE FLIES AND THE EFFECT ON LATENT TOX1CITY.
F F Sanchez M Sherman
J Econ Entom 59(2):272-277, 8I8L. 276-277
Apr 1966 421 J822
Insecticide resistant insects, DDT , Metabolism,
Musca domestica, Musca domestica.

1685-67
TOXICOLOGY OF WOOD PRESERVATIVES TO SWINE.
I A Schipper
Amer Coll Vet Toxicol Pr 9-13
1960 391.9 AM3
Lumber preservatives, Swine, Toxicology.

1686-67
FUNGICIDAL ACTIVITY AND STRUCTURE: PREPARATION AND FUNGITOXICITY OF SOME TRIALKYL PHOSPHOROTETRATHIOATES.
C 8 Scott J W Yale Jr S Hashimoto
J Agr Food Ch 8(4):303-306, TA8S.
Jul 1960 381 J8223
Trialkyl phosphorotetrathioates.

1687-67
THE EFFECTS OF COUMAPHOS ON POULTRY AND ITS RESIDUES IN TISSUE AND EGGS.
F R Shaw C T Smith D L Anderson W J Fischang W H Ziener
J Econ Entom S7(4):S16-S18, TABS.
Aug 1964 421 J822
Chickens, Coumaphos, Eggs, Insecticide residues.

1688-67
ACUTE AND SUBACUTE TOXICITY OF SEVERAL INSECTICIDES TO CHICKS.
M Sherman E Ross M T Y Chang
Toxicol Appl Pharmac 7(4):606-608
Jul 1965 391.8 T662
Chicks, Feed toxicity, Insecticides, Poultry manure.

1689-67
ACUTE AND SUBACUTE TOXICITY OF SEVERAL ORGANOPHOSPHORUS INSECTICIDES TO CHICKS.
M Sherman E Ross M T Y Chang
Toxicol Appl Pharmac 6(1):147-153
Jan 1964 391.8 T662
Chicks, Feed additives, Insecticides, Organophosphorous.

1690-67
FIELD EXPERIMENTS ON INSECTICIDAL CONTROL OF LEPIDOPTEROUS LARVAE ON CABBAGE AND CAULIFLOWER.
H H Shorey
J Econ Entom S6(6):877-880, TABS.
Dec 1963 421 J822
Cabbage, Cauliflower, Insecticides, Larvae, Lepidoptera.

1691-67
TOXICITY OF CHEMICAL AND MICROBIAL INSECTICIDES TO PEST AND BENEFICIAL INSECTS ON POLED TOMATOES.
H H Shorey I M Hall
J Econ Entom S6(6):813-817, TABS.
Dec 1963 421 J822
Insect pests, Insecticides, Insects, Tomatoes.

1692-67
DIFFERENTIAL TOXICITY OF INSECTICIDES TO THE CABBAGE APHID AND TWO ASSOCIATED ENTOMOPHAGOUS INSECT SPECIES.
H H Shorey
J Econ Entom S6(6):844-847, TABS.
Dec 1963 421 J822
Brevicoryne brassicae, Brevicoryne brassicae (L.), Diaeretiella rapae (McIntosh), Hippodamia, Insecticides.

1693-67
ACARICIDAL PROPERTIES OF ARAMITE AND KELTHANE AGAINST TWO STRAINS OF TWO-SPOTTED SPIDER MITE.
D Shriver T J Henneberry
J Econ Entom S5(5):617-618
Oct 1962 421 JB22
Acaricides, Aramite, Dicofol, Dicofol, Tetranychus telarius (L.), Tetranychus urticae.

1694-67
PERSISTENT PSYCHIATRIC SYMPTOMS FROM EXPOSURE TO ORGANOPHOSPHATE INSECTICIDES.
P W Smith J R Dille
Toxicol Appl Pharmac 6(3):359
May 1964 391.8 T662
Insecticides, Mental disorders, Organophosphorous.

1695-67
TOXICITY OF PINE RESIN VAPORS TO THREE SPECIES OF DENDROCTONUS BARK BEETLES.
R H Smith
J Econ Entom S6(6):827-831, BIBL. B30-B31, TABS.
Dec 1963 421 J822
Dendroctonus brevicomis Le Conte, Dendroctonus jeffreyi Hopkins, Dendroctonus monticolae Hopkins, Insecticidal plants, Pinus, Resins.

1696-67
TESTS WITH DICHLORVOS VAPORS FOR THE CONTROL OF MUSHROOM FLIES.
R Snetsinger D Miner
J Econ Entom S7(1):182-183
Feb 1964 421 JB22
Dichlorvos, Insect control, Mushroom fly.

1697-67
THE FUMIGANT TOXICITY OF TWO NEW CHEMICALS TO STORED-PRODUCT INSECTS.
R L Soles P K Harein
J Econ Entom S5(6):1014-1015
Dec 1962 421 J822
Chemicals, Fumigation, Insect control, Stored products, Toxicology.

1698-67
EFFECT OF INSECTICIDES ON NEUROPHYSIOLOGICAL ACTIVITY IN INSECTS.
J Sternburg
J Agr Food Ch 8(4):257-261, BIBL. 261.
Jul 1960 381 JB223
Insect neurophysiology, Insecticides.

1699-67
MICRONIZED INSECTICIDAL DUSTS FOR AIRCRAFT DISINSECTIZATION.
W N Sullivan S O Hill C H Gaddis R D Chisholm V A Johnson
J Econ Entom S6(6):869-872, BIBL. 871-872, TABS.
Dec 1963 421 J822
Aircraft disinfestation, Dusting, Insecticide application, Insecticides, Popillia japonica Newman.

1700-67
SYNERGISTIC AND ANTAGONISTIC ACTIONS OF INSECTICIDE-SYNERGIST COMBINATIONS AND THEIR MODE OF ACTION.
Y P Sun E R Johnson
J Agr Food Ch 8(4):261-266, TABS.
Jul 1960 381 J8223
Insecticide synergists.

1701-67
PHYTOTOXICITY OF HERBICIDES: REDUCTION OF 3-AMINO-1,2,4-TRIAZOLE PHYTOTOXICITY IN TOMATO PLANTS.
K A Sund E C Putala H N Little
J Agr Food Ch 8(3):210-212, BIBL. 212, TABS.
May 1960 381 JB223
Amitrole, Herbicides, Tomatoes.

1702-67
FIELD AND LABORATORY STUDIES ON CONTROL OF CURRANT BORER.
E F Taschenberg A W Avens
J Econ Entom S7(1):123-130, TABS.
Feb 1964 421 JB22
Insect control, Insecticides, Ramosia tipuliformis, Ramosia tupiiformis.

1703-67
PROPERTIES OF PETROLEUM OILS IN RELATION TO TOXICITY TO CITRUS RED MITE EGGS.
K Trammel
J Econ Entom S8(4):595-601, TABS.
Aug 1965 421 JB22
Oils, Panonychus citri, Panonychus citri (McGregor), Petroleum.

1704-67
PRELIMINARY REPORT OF SELENIUM TOXICITY IN SHEEP.
J O Tucker
Amer Coll Vet Toxicol Pr 41-45
1960 391.9 AM3
Sheep, Toxicology.

1705-67
ACTION OF LATRODECTUS MACTANS TREDECIMGUTTATUS VENOM AND FRACTIONS ON CELLS CULTIVATED IN VITRO.
G Vicari S Bettini C Collotti N Frontali
Toxic 3(2):101-106, BIBL. 106
Nov 1965 391.8 T66
Cells, Latrodectus mactans tredecimguttatus, Proteins, Spiders, Venoms.

1706-67
DIETARY CONSIDERATIONS OF THE RADIONUCLIDE CONTAMINATION OF NONMILK FOODS.
R H Wasserman C L Comar
J Agr Food Ch 9(2):113-116, TABS.
Mar 1961 381 J8223
Cesium isotopes, Food contamination, Irradiated food, Strontium isotopes.

1707-67
BIOCHEMICAL STUDIES OF THE VENOM FROM THE SCORPION, CENTRUROIDES SCULPTURATUS.
D D Watt
Toxic 2(3):171-180, BIBL. 179-180, TABS.
Dec 1964 391.8 T66
Centruroides sculpturatus Ewing, Scorpionida, Venoms.

1708-67
PRELIMINARY OBSERVATIONS CONCERNING THE USE OF SYSTEMIC INSECTICIDES IN LARGE TREES FOR CONTROL OF THE EUROPEAN ELM SCALE.

60 1709-67

J E Weaver C K Doraey
J Econ Entom 59(1):241-242
Feb 1966 421 J822
Gossyparia spuria, Gossyparia spuria (Modeer),
Systemic insecticides, Trees.

1709-67
RELATIONSHIP BETWEEN SHORT- AND LONG-TERM FEEDING STUDIES IN DESIGNING AN EFFECTIVE TOXICITY TEST.
C S Weil D D McCollister
J Agr Food Ch 11(6):486-491, TABS.
Nov 1963 381 JB223
Feed toxicity, Feeding study.

1710-67
EFFECTS OF CHEMICALS ON EUROPEAN CORN BORER EGGS.
A L Wells G Guyer
J Econ Entom 55(5):631-633, TABS.
Oct 1962 421 JB22
Chemicals, Insect eggs, Ostrinia nubilalis,
Ostrinia nubilalis (Huebner).

1711-67
FOOD ADDITIVES, SAFETY: EFFECT OF FEEDING BUTYLATED HYDROXYANISOLE TO DOGS.
O H M Wilder P C Ostby 8 R Gregory
J Agr Food Ch 8(6):504-506
Nov 1960 3B1 JB223
Butylated hydroxyanisole, Dogs, Food additives.

1712-67
ACUTE AND SUBACUTE TOXICITY OF TRITHION AND THE DIMETHYL HOMOLOG.
M W Williams
Toxicol Appl Pharmac 3(5):500-508
Sep 1961 391.8 T662
Carbophenothion, Toxicology.

1713-67
TOXICOLOGY OF PYRIDINETHIONES.
C L Winek
Toxicol Appl Pharmac 6(3):363
May 1964 391.8 T662
Animals, Pyridinethiones, Toxicology.

1714-67
OILS AND SURFACTANTS ALONE, AND INSECTICIDE-OIL COMBINATIONS FOR APHID CONTROL ON TURNIPS AND CABBAGE.
D A Wolfenbarger
J Econ Entom 57(4):571-574, TABS.
Aug 1964 421 J822
Brevicoryne brassicae (L.), Cabbage, Insecticides, Oils,
Rhopalosiphum pseudobrassicae (Davis),
Surface-active agents, Turnips.

1715-67
EVALUATION OF APHOLATE AND TEPA AS CHEMOSTERILANTS FOR THE FALL ARMYWORM.
J R Young H C Cox
J Econ Entom 58(5):883-888
Oct 1965 421 J822
Apholate, Chemosterilants, Pseudaletia unipuncta,
Spodoptera frugiperda, Tepa.

1716-67
EVALUATION OF SHELL SD-B447 FOR CONTROL OF TWO SWEET CORN INSECTS.
J R Young M C Bowman
J Econ Entom 59(1):170-173
Feb 1966 421 J822
Heliothis zea (Boddie), Insects, Shell SD-B447 ,
Spodoptera frugiperda (J. E. Smith), Sweet corn.

1717-67
PRELIMINARY STUDIES OF THE TOXICITY OF CARBOPHENOTHION AND METHYL TRITHION IN LIVESTOCK.
R L Younger R D Radeleff J B Jackson
J Econ Entom 56(6):757-759
Dec 1963 421 J822
Carbophenothion, Livestock, Methyl trithion.

1718-67
THE RELATION BETWEEN UPTAKE AND TOXICITY OF ORGANOPHOSPHATES FOR EGGS OF THE LARGE MILKWEED BUG.
J Zschintzsch R D O brien E H Smith
J Econ Entom 58(4):614-621, TABS.
Aug 1965 421 J822
Insect eggs, Oncopeltus fasciatus, Oncopeltus fasciatus,
Organophosphates.

1719-67
PARATHION STUDIES ON BEAN GROWN IN STERILE ROOT CULTURE.
B M Zuckerman C W Miller R M Devlin W E Tomlinson
J Econ Entom 59(5):1157-1160
Oct 1966 421 JB22
Beans, Parathion, Sterile root culture.

1720-67
TOXICITY OF PCNB TO MAGNOLIA FUSCATA.
N Zummo A G Plakidas
Plant Dis R 44(7):559
15 Jul 1960 1.9 P69P
Magnolia fuscata, Pentachloronitrobenzene, Spraying,
Toxicology.

65 PLANT PHYSIOLOGY & BIOCHEMISTRY

1721-67
METHOD OF CHLAMYDOSPORE GERMINATION OF ISPHACELOTHECA REILIANA IN SOIL.
I A Al-Isohally C J Mankin
Phytopatholo 50(9):627
Sep 1960 464.8 P56
Chlamydospores, Seed germination, Soil moisture, Sphacelotheca reliana.

1722-67
ACTIVITY OF THE ANTIBIOTIC PRODUCED BY PULLULARIA PULLULANS.
N L Baigent J M Ogawa
Phytopatholo 50(1):82
Jan 1960 464.8 P56
Antibiotics, Pullularia pullulans.

1723-67
PARTIAL PURIFICATION OF SELF-INHIBITORS OF GERMINATION FROM UREDOSPORES OF UROMYCES PHASEOLI VAR. TYPICA.
A A Belt
Phytopatholo 50(9):629
Sep 1960 464.8 P56
Purification, Seed germination, Uredospores, Uromyces phaseoli var. typica.

1724-67
HEAT-INDUCED ABNORMALITIES - A MODEL DISEASE.
G T A Benda
Phytopatholo 50(9):629
Sep 1960 464.8 P56
Heat, Nicotiana glutinosa, Virus diseases (plants).

1725-67
TOXIN PRODUCTION BY HELMINTHOSPORIUM VICTORIAE ON SYNTHETIC MEDIA CONTAINING DIFFERENT NITROGEN SOURCES.
R W Berry M C Futrell
Phytopatholo 50(9):629
Sep 1960 464.8 P56
Culture media, Helminthosporium victoriae, Nitrogen compounds, Toxins.

1726-67
THE INFLUENCE OF OIL CONTENT ON THE SUSCEPTIBILITY OF SEEDS TO FUMIGATION WITH METHYL BROMIDE.
R E Blackith O F Lubatti
J Sci Food A 11(5):253-258, TABS.
May 1960 3B2 SO12
Fumigation, Methyl bromide, Oils, Seeds.

1727-67
THE EFFECT OF NUTRITION ON GERMINATION OF CONIDIA OF HELMINTHOSPORIUM SATIVUM IN NATURAL SOIL.
M G Boosalis
Phytopatholo 50(9):629
Sep 1960 464.8 P56
Conidia, Helminthosporium sativum, Plant nutrition, Seed germination, Soil fungi.

1728-67
DNA CONTENT OF PRUNUS LEAF TISSUE.
R E Brown D F Millikan
Phytopatholo 50(9):630
Sep 1960 464.8 P56
Deoxyribonucleic acid, Leaves, Prunus.

1729-67
ALTERING THE EFFECT OF OAT RUST RESISTANT GENES BY CERTAIN PHYSICAL MEANS.
J A Browning
Phytopatholo 50(9):630
Sep 1960 464.8 P56
Crown rust (oats), Oats, Puccinia graminis avenae, Stem rust (oats).

1730-67
EFFECT OF GIBBERELLIC ACID ON THE EXTRACTION OF PROTEIN FROM THE LEAVES OF SPRING VETCHES (VICIA SATINA L.).
M Byers G Jenkins
J Sci Food A 12(10):656-661, TABS.
Oct 1961 3B2 SO12
Gibberellic acid, Leaves, Proteins, Vetch, Vicia satina L..

1731-67
THE GROWING AND MANURING OF TEA.
R Child
J Sci Food A 15(3):133-142
Mar 1964 3B2 SO12
Manures, Plant physiology, Tea.

1732-67
DEPTH OF FEEDING AS IT AFFECTS THE CONCENTRATION OF RADIOACTIVITY WITHIN THE PLANT.
C W Christenson E B Fowler
J Agr Food Ch 9(2):98-100
Mar 1961 381 J8223
Plant contamination, Plant nutrition, Radioactive substances.

1733-67
ESTERS PRODUCED BY ENDOCONIDIAL-FORMING FUNGI.
R P Collins M E Morgan
Phytopatholo 50(9):632
Sep 1960 464.8 P56
Ceratocystis fimbriata var. planti, Esters, Fungi, Thielaviopsis.

1734-67
USE OF GIBBERELLIC ACID IN FACILITATING THE MECHANICAL HARVESTING OF DWARF BEANS.
J Dancer
J Sci Food A 12(9):648-650
Oct 1961 3B2 SO12
Dwarf beans, Gibberellic acid, Harvesting, Potassium salts.

1735-67
RESPONSES OF GRAPEFRUIT TREES TO VARIOUS SPRAY OIL FRACTIONS.
H A Dean J C Bailey
J Econ Entom 56(5):547-551, BIBL. 550-551, TABS.
Oct 1963 421 J822
Grapefruit, Oils, Plant physiology, Spraying.

1736-67
ROLE OF PECTIC ENZYMES IN SUSCEPTIBILITY AND RESISTANCE TO FUSARIUM VERTICILLIUM WILTS OF PLANTS.
D C Deese M A Stahmann
Phytopatholo 50(9):633
Sep 1960 464.8 P56
Fusarium, Pectins, Plant enzymes, Verticillium.

1737-67
UPTAKE AND DISTRIBUTION OF STRONTIUM IN VEGETABLES AND CEREALS.
R B Duckworth J Hawthorn
J Sci Food A 11(4):218-225
Apr 1960 3B2 SO12
Grain, Vegetables.

1738-67
EFFECT OF CHARGE OF IONIZED CHEMOTHERAPEUTANTS ON THEIR TRANSLOCATION THROUGH XYLEM.
L V Edgington A E Dimond
Phytopatholo 50(4):239-240
Apr 1960 464.8 P56
Chemotherapeutants, Plant translocation, Xylem.

1739-67
REVIEW OF HERBICIDE PENETRATION THROUGH PLANT SURFACES.
C L Foy
J Agr Food Ch 12(5):473-476, BIBL. 476
Sep 1964 3B1 JB223
Cuticle, Herbicides, Penetration.

1740-67
FERTILIZATION OF PYCNIA WITH UREDIOSPORES IN PUCCINIA GRAMINIS VAR. TRITICI.
W N Garrett R D Wilcoxson
Phytopatholo 50(9):636
Sep 1960 464.8 P56
Fertilization (plants), Puccinia graminis var. tritici, Pycnia, Urediospores.

1741-67
EFFECTIVENESS OF CHEMICAL DIP TREATMENTS ON THE CULTURE OF CROFT LILIES.
E C Gaslorkiewicz
Phytopatholo 50(9):636
Sep 1960 464.8 P56

65 1742-67

Dipping, Lilium longiflorum, Root rot (lilium longiflorum).

1742-67
METABOLISM OF DIMETHOATE IN COTTON LEAVES.
J Macskayio D L Buil
J Agr Food Ch 11(6):464-466
Nov 1963 3B1 JB223
Cotton, Dimethoate, Plant metabolism.

1743-67
SULPHUR NUTRITION OF APHANOMYCES EUTEICHES.
W A Haglund T H King
Phytopatholo S0(9):637-638
Sep 1960 464.B PS6
Aphanomyces euteiches, Plant nutrition, Sulphur.

1744-67
TOLERANCE OF SEVERAL GRASS SPECIES TO 2-CHLORO-S-TRIAZINE HERBICIDES IN RELATION TO DEGRADATION AND CONTENT OF BENZOXAZINONE DERIVATIVES.
R H Hamilton
J Agr Food Ch 12(1):14-17, BIBL. 17
Jan 1964 3B1 JB223
Benzoxazinone, Grasses, Herbicides, Plant metabolism, 2-chloro-s-triazine.

1745-67
A HOLLY LEAF SPOT ASSOCIATED WITH THE USE OF COPPER FUNGICIDES.
E A Herridge R C Lambe
Phytopatholo 50(1):B4
Jan I960 464.B P56
Fungicides, Holly leaf spot.

1746-67
PLANT INJURY INDUCED BY ATMOSPHERIC OZONE.
A C Hill M R Pack M Treshow R J Downs L G Transtrum
Phytopatholo S0(9):639
Sep 1960 464.8 PS6
Ozone, Plant injuries.

1747-67
STUDIES ON UPTAKE AND TRANSLOCATION OF C14-LABELED P-DIMETHYLAMINOBENZENEDIAZO SODIUM SULFONATE (DEXON) BY SUGAR BEET SEEDLINGS.
F J Hills
Phytopatholo S0(9):639
Sep I960 464.8 PS6
Carbon-14, Para-dimethylaminobenzenediazo sodium sulfonate, Plant translocation, Seedlings, Sugar beets.

1748-67
METABOLISM IN VITRO OF PHLORIDZIN AND OTHER HOST COMPOUNDS BY VENTURIA INAEQUALIS.
J Holowczak J Kuc E B Williams
Phytopatholo S0(9):640
Sep 1960 464.8 PS6
Phlorizin, Venturia inaequalis.

1749-67
ANTISPORULANT ACTION OF HEXACHLORO-2-PROPANOL.
J G Horsfall S Rich
Phytopatholo 50(9):640
Sep 1960 464.8 P56
Antisporulation, Hexachloro-2-propanol.

17S0-67
METABOLISM OF ALPHA-CHLORO-N,N-DIALLYLACETAMIDE(CDAA) AND 2-CHLOROALLYL-N,N-DIETHYLDITHIOCARBAMATE(CDEC) BY PLANTS.
E G Jaworski
J Agr Food Ch 12(1):33-37, TA8S.
Jan I964 3B1 J8223
Alpha-chloro-NN-diallyl-acetamide, Herbicides, Plant metabolism, 2-chloroallyl-NN-diethyldithiocarbamate.

17S1-67
COMPARATIVE FUNGITOXICITY OF SOME MONO- AND DIALKYL-SUBSTITUTED DITHIOCARBAMATE VAPORS AND SOLUTIONS.
J B Kendrick Jr
Phytopatholo S0(9):641
Sep 1960 464.8 P56
Alkylation, Dithiocarbamic acid, Fungitoxicity, Vapors.

1752-67
DIFFERENTIAL LONGEVITY OF TELIOSPORES OF PATHOGENIC RACES OF TILLETIA AND T. FOETIDA.
E L Kendrick C S Holton
Phytopatholo 50(1):SI-S4
Jan 1960 464.8 P56
Fungi, Teliospores, Tilletia caries, Tilletia foetida.

1753-67
SOME FACTORS AFFECTING SPORANGIUM FORMATION OF PHYTOPHTHORA CRYPTOGEA.
B W Kennedy D C Erwin
Phytopatholo 50(9):641
Sep 1960 464.8 PS6
Culture media, Phytophthora cryptogea, Sporangia.

17S4-67
INDUCED COLOR MUTANTS IN RHYNCHOSPORIUM SECALIS.
D M Kline
Phytopatholo S0(9):642
Sep 1960 464.B PS6
Color mutants, Mutation, Rhynchosporium secalis.

17SS-67
OBSERVATIONS ON THE EMERGENCE OF THE MICROSPORIDIAN SPOROPLASM.
J P Kramer
J Invertebrate Path 2(4):433-439
1960 421 JB26
Microsporidia, Nosema apis Zander, Nosema whitei Weiser, Perezia pyraustae Palllot, Sporoplasm.

17S6-67
TURNOVER OF CERTAIN KREBS CITRIC-ACID INTERMEDIATES IN HEALTHY AND RUSTED TISSUES.
L R Krupka J M Daly
Phytopatholo 50(9):643
Sep 1960 464.B PS6
Citric acid, Rust (beans), Rust (wheat), Tricarboxylic acid cycle.

1757-67
THE EFFECTS OF THE FEEDING OF THE POTATO LEAFHOPPER ON PHOTOSYNTHESIS AND RESPIRATION IN THE POTATO PLANT.
T L Ladd Jr W A Rawlins
J Econ Entom 58(4):623-62B
Aug 1965 42I J822
Ennomos subsignarius, Ennomos subsignarius (Hubner), Head capsule.

17SB-67
THE INFLUENCE OF TWO SYSTEMIC ORGANOPHOSPHATES ON GROWTH, FRUITING, AND YIELD OF COTTON IN CALIFORNIA.
T F Leigh
J Econ Entom 56(4):517-522, 8IBL., S21-522, TA8S.
Aug 1963 421 JB22
California, Cotton, Crop yields, Plant physiology, Systemic insecticides.

17S9-67
SYSTEMIC FUNGICIDES:THE TRANSLOCATION AND PERSISTENCE OF TRITIUM-LABELED CYCLOHEXIMIDE IN EASTERN WHITE PINE SEEDLINGS.
A J Lemin R C Thomas
J Agr Food Ch 9(4):2S4-256
Jul 1961 3B1 JB223
Chromatography, Essential oils, Mentha arvensis, Mentha piperita.

1760-67
NATURALLY OCCURRING INSECTICIDES IN CRUCIFEROUS CROPS.
E P Lichtenstein D G Morgan C H Mueller
J Agr Food Ch 12(2):1S8-161
Mar 1964 3B1 JB223
Insecticidal plants, Rutabagas, Turnips, 2-phenylethylisothiocyanate.

1761-67
TRANSLOCATION OF SOME CHLORINATED HYDROCARBON INSECTICIDES INTO THE AERIAL PARTS OF PEA PLANTS.
E P Lichtenstein K R Schulz
J Agr Food Ch B(6):4S2-4S6, BIBL. 4SS-456, TA8S.
Nov 1960 381 J8223
Hydrocarbons, Insecticides, Peas, Plant translocation.

1762-67
PERSISTENCE AND TRANSLOCATION OF EXOGENOUS REGULATING COMPOUNDS THAT EXUDE FROM ROOTS.
P J Linder J W Mitchell G D Freeman
J Agr Food Ch 12(5):437-438
Sep 1964 381 JB223
Exudates, Plant regulators, Plant translocation, Roots.

1763-67
SEED DISINFECTION: FUNGICIDE AND DYE DISTRIBUTION IN LIQUID SEED TREATMENT.
O Lindstroem
J Agr Food Ch 8(3):217-224, TABS.

May 1960 38I J8223
Dyes, Fungicides, Panogen process, Seed treatment.

1764-67
FUNGISTATIC EFFECTS OF LIGNIN, LIGNIN MONOMERS, AND MODEL SU8STANCES.
8 T Lingappa J L Lockwood
Phytopatholo S0(9):644
Sep 1960 464.8 P56
Fungicides, Glomerella cingulata, Lignin.

1765-67
SUPERIOR MEDIA FOR ISOLATION OF ACTINOMYCETES FROM SOIL.
Y Lingappa J L Lockwood
Phytopatholo S0(9):644
Sep I960 464.8 PS6
Actinomycetes, Chitin, Culture media.

I766-67
DEGRADATION OF 4-(2,4-DICHLOROPHENOXY)-8UTYRIC ACID (4-(2,4-D8)) IN PLANTS.
D L Linscott
J Agr Food Ch 12(1):7-10
Jan 1964 381 J8223
Herbicides, Plant metabolism, 4-(2,4-D8) .

1767-67
A MYROTHECIUM ROT OF GLOXINIAS.
R H Litrell
Plant Dis R 49(I): 78-80
IS Jan I96S 1.9 P69P
Gloxinia, Myrothecium roridum, Sinningia speciosa.

I768-67
DETECTION OF COMPOUNDS THAT INHI8IT VEGETATIVE 8UD GROWTH OF TO8ACCO.
P C Marth J W Mitchell
J Agr Food Ch 12(I):6I-64
Jan I964 381 J8223
Plant budding, Plant growth inhibitors, Tobacco.

1769-67
GROWTH RETARDANTS AND PLANT VIGOR:INCREASING TOLERANCE OF SOY8EAN PLANTS TO SOME SOLU8LE SALTS THROUGH APPLICATION OF PLANT GROWTH-RETARDANT CHEMICALS.
P C Marth J R Frank
J Agr Food Ch 9(S):3S9-361
Sep I96I 381 J8223
Plant growth inhibitors, Plant hardiness, Salts, Soybeans.

1770-67
THE DIPLOID NUCLEUS OF PUCCINIA CARTHAMI IN UNSTAINED WATER MOUNTS.
A H McCain
Phytopatholo S0(1):85
Jan I960 464.8 PS6
Cell nucleus, Diploid, Puccinia carthami.

1771-67
THE EFFECT OF MINERAL NUTRITION ON SPORE GERMINATION AND GROWTH RESPONSES IN ASPERGILLUS NIGER AND SOME OTHER FUNGI.
J S Melching G F Gregory
Phytopatholo 50(9):645
Sep 1960 464.8 PS6
Aspergillus niger, Fungi, Minerals, Plant nutrition, Spore germination.

1772-67
HER8ICIDE META8OLISM:A8SORPTION AND META8OLISM OF AMINO-TRIAZOLE IN COTTON.
C S Miller W C Hall
J Agr Food Ch 9(3):2I0-212
May 1961 38I J8223
Amitrole, Cotton.

I773-67
UPTAKE AND INNATE TOXICITY OF DODINE (N-DODECYLGUANIDINE ACETATE) TO FUNGUS CONIDIA.
L P Miller
Phytopatholo 50(9):646
Sep 1960 464.8 PS6
Conidia, Dodine, Fungi.

I774-67
RELATIONSHIP OF LIPID CONTENTS OF FUNGAL CONIDIA TO UPTAKE OF TOXICANTS.
L P Miller E Richter
Phytopatholo 50(9):646
Sep 1960 464.8 PS6
Conidia, Fungi.

1775-67
MOVEMENT OF RADIOISOTOPES IN RHIZOCTONIA SOLANI.
A M Monson
Phytopatholo 50(9):646
Sep 1960 464.8 P56
Isotopes, Radioactive substances, Rhizoctonia solani.

1776-67
METABOLISM OF TRIAZINE HER8ICIDES 8Y PLANTS.
M L Montgomery V H Freed
J Agr Food Ch I2(1):11-14
Jan 1964 381 J8223
Herbicides, Plant metabolism, Triazine.

I777-67
THE ANTIGENIC ANALYSIS OF EXTRACTS FROM HEALTHY PLANTS.
E L Moorhead
Phytopatholo S0(9):646-647
Sep I960 464.8 PS6
Antigens, Plant extracts.

1778-67
HEALTH STATUS OF SISAL PLANTS (AGAVE SISLANA) AS RELATED TO SOILS AND THE MINERAL COMPOSITION OF THEIR LEAVES.
A Muller
J Sci Food A I5(2):129-I32
Feb 1964 382 SO12
Leaves, Minerals, Plant hardiness, Sisal, Soils.

1779-67
NICANDRENONE, A NEW COMPOUND WITH INSECTICIDAL PROPERTIES, ISOLATED FROM NICANDRA PHYSALODES.
O Nalbandov R T Yamamoto G S Fraenkel
J Agr Food Ch 12(I):S5-S9
Jan 1964 381 J8223
Insecticidal plants, Nicandra physalodes, Nicandrenone.

1780-67
THE RELATIONSHIP OF CONIDIAL MORPHOLOGY AND INTERSPECIFIC FERTILITY IN THE GENUS HELMINTHOSPORIUM.
R R Nelson
Phytopatholo S0(9):648-649
Sep 1960 464.8 PS6
Conidia, Helminthosporium.

1781-67
UPTAKE OF RADIOACTIVE FISSION PRODUCTS 8Y CROP PLANTS.
H Nishita E M Romney K H Larson
J Agr Food Ch 9(2):I01-I06, 8I8L. 10S-I06, TA8S.
Mar I96I 38I J8223
Crops, Plant contamination, Radioactive substances, Soil contamination.

1782-67
RELATIONS OF SPORE MOISTURE TO SPORE SHAPE AND GERMINATION REACTION TO TEMPERATURE.
J M Ogawa A H McCain
Phytopatholo 50(I):8S
Jan 1960 464.8 P56
Seed germination, Spore moisture, Spore shape.

1783-67
SAPROPHYTIC ACTIVITY AND SURVIVAL OF RHIZOCTONIA IN SOIL AS AFFECTED 8Y SOME ECOLOGICAL FACTORS.
G C Papavizas C 8 Davey
Phytopatholo 50(9):6S0
Sep I960 464.8 PS6
Plant ecology, Rhizoctonia, Saprophytes, Soil fungi.

1784-67
OOSPORE FORMATION 8Y APHANOMYCES EUTEICHES ON SYNTHETIC MEDIA.
G C Papavizas C 8 Davey
Phytopatholo 50(9):6S0
Sep I960 464.8 P56
Aphanomyces euteiches, Culture media, Oospore formation.

1785-67
EFFECTS OF NITROGEN AND POTASSIUM FERTILISERS ON THE MINERAL STATUS OF PERENNIAL RYEGRASS (LOLIUM PERENNE). I. MINER-AL CONTENT.
H Rahman P McDonald K Simpson
J Sci Food A I1(7):422-428, TA8S.
Jul I960 382 SOI2
Fertilizers, Lolium perenne, Minerals, Nitrogen, Potassium.

1786-67
EFFECTS OF NITROGEN AND POTASSIUM FERTILISERS ON THE MINERAL STATUS OF PERENNIAL RYEGRASS (LOLIUM PERENNE). II. ANION -CATION RELATIONSHIP.

65 17B7-67

H Rahman P McDonald K Simpson
J Sci Food A 11(8):429-432, TABS.
Aug 1960 382 S012
Fertilizers, Ions, Lolium perenne, Minerals, Nitrogen, Potassium.

17B7-67
ENZYME INHIBITION: THE TRYPSIN INHIBITOR OF ALFALFA.
J S Ramirez H L Mitchell
J Agr Food Ch 8(5):393-395, TABS.
Sep 1960 381 J8223
Alfalfa, Enzymes, Trypsin.

178B-67
CULTURE MEDIA FOR VIABILITY STUDIES AND STORAGE OF ERWINIA AMYLOVORA.
J F Reinhardt D Powell
Phytopatholo 50(9):685-686
Sep 1960 464.8 P56
Culture media, Erwinia amylovora.

1789-67
RUMEN DEGRADATION OF FUNGICIDES:FATE OF TETRAMETHYLTHIURAM DISULFIDE IN THE DIGESTIVE TRACT OF THE RUMINANT ANIMAL.
R C Robbins J Kastelic
J Agr Food Ch 9(4):256-260
Jul 1961 381 J8223
Autoxidation, Potatoes.

1790-67
AVAILABILITY OF EXCHANGEABLE AND NON-EXCHANGEABLE STRONTIUM-90 TO PLANTS.
H Roberts Jr R G Menzel
J Agr Food Ch 9(2):95-98
Mar 1961 381 J8223
Plant contamination, Soil contamination, Strontium isotopes.

1791-67
MUTATION FOR PATHOGENICITY IN PUCCINIA GRAMINIS VAR. TRITICI.
J B Rowell W A Loegering H R Powers Jr
Phytopatholo 50(9):653
Sep 1960 464.8 P56
Mutation, Puccinia graminis var. tritici.

1792-67
PRODUCTION OF OOSPORES BY INTER- AND INTRASPECIFIC PAIRINGS WITHIN THE GENUS PHYTOPHTHORA.
E J Savage C W Clayton M E Gallegly
Phytopatholo 50(9):653
Sep 1960 464.8 P56
Oospores, Pairings, Phytophthora.

1793-67
EFFECT OF COPPER AND GLYODIN FUNGICIDES ON AMINO ACID AND SUGAR CONTENT AND OXYGEN USE OF COLLETOTRICHUM CAPSICI.
M R Siegel D F Crossan
Phytopatholo 50(9):680-685, BIBL. 684-685, TABS.
Sep 1960 464.8 P56
Amino acids, Colletotrichum capsici, Copper sulfate, Fungicides, Sugar.

1794-67
FATE OF 2,2-DICHLOROPROPIONIC ACID (DALAPON) IN THE COTTON PLANT.
G N Smith D L Dyer
J Agr Food Ch 9(2):155-160
Mar 1961 381 J8223
Cotton, Dalapon.

1795-67
RESISTANCE TO THE TWO SPOTTED SPIDER MITE IN PELARGONIUM.
R Snetsinger C P Balderston R Craig
J Econ Entom 59(1):76-78
Feb 1966 421 J822
Pelargonium, Tetranychus telarius (L.), Tetranychus urticae, Tetranychus urticae (Koch).

1796-67
STUDIES OF ENDOSULFAN IN BEAN PLANTS BY PAPER AND GAS CHROMATOGRAPHY.
A C Terranova G W Ware
J Econ Entom 56(5):596-599
Oct 1963 421 J822
Beans, Chromatography, Endosulfan, Plant translocation.

1797-67
CRAMBE: SUSCEPTIBILITY TO SOME PLANT VIRUSES.
H H Thornberry M R Phillippe
Plant Dis R 49(1):74-77, TABS.
15 Jan 1965 1.9 P69P
Crambe, Crambe abyssinca, Host indexing (plants), Virus diseases (plants).

1798-67
AN ENRICHMENT METHOD FOR ISOLATING ACTINOMYCETES THAT PRODUCE DIFFUSIBLE ANTIFUNGAL ANTIBIOTICS.
P H Tsao C Leben G W Keitt
Phytopatholo 50(1):88-89
Jan 1960 464.8 P56
Actinomycetes, Antibiotics.

1799-67
ABSORPTION OF RADIONUCLIDES BY ABOVEGROUND PLANT PARTS AND MOVEMENT WITHIN THE PLANT.
H B Tukey S H Wittner M J Bukovac
J Agr Food Ch 9(2):106-113, BIBL. 112-113
Mar 1961 381 J8223
Radioactive substances, Radionuclides.

1B00-67
SIMILAR METABOLIC ALTERATIONS INDUCED IN SWEET POTATO BY POISONOUS CHEMICALS AND BY CERATOSTOMELLA FIMBRIATA.
I Uritani M Uritani H Yamada
Phytopatholo 50(1):30-34
Jan 1960 464.8 P56
Ceratostomella fimbriata, Plant metabolism, Toxicology.

1801-67
PLANT TISSUE ANALYSIS: X-RAY FLUORESCENCE DETERMINATION OF ZINC IN PLANT TISSUES.
L D Whittig J R Buchanan A L Brown
J Agr Food Ch 8(5):419-421
Sep 1960 381 J8223
Fluorescence, Plant analysis, Spectroscopy, X-rays, Zinc.

1802-67
EFFECTS OF CERTAIN TEMPERATURES AND SEED TREATMENTS ON EMERGENCE AND TERMINAL BREAKDOWN OF COTTON SEEDLINGS.
A B Wiles
Phytopatholo 50(9):658
Sep 1960 464.8 P56
Cotton, Seed treatment, Seedlings, Temperature.

1803-67
IDENTIFICATION OF METABOLITES OF ZECTRAN INSECTICIDE IN BROCCOLI.
E Williams R W Meikle C T Redemann
J Agr Food Ch 12(5):453-457, BIBL. 456-457.
Sep 1964 381 J8223
Broccoli, Plant metabolism, Zectran.

1B04-67
PECTINOLYTIC AND CELLULOLYTIC (CX) ENZYME PRODUCTION BY CUCURBIT ANTHRACNOSE FUNGI.
N N Winstead C L McCombs
Phytopatholo 50(9):659
Sep 1960 464.8 P56
Anthracnose fungi, Celluiolytic enzymes, Pectinolytic enzymes.

70 CHEMISTRY

1805-67
QUANTITATIVE GAS CHROMATOGRAPHY OF ISOMERS OF INSECT REPELLENT N,N-DIETHYLTOLUAMIDE.
F Acree Jr M Beroza
J Econ Entom 55(5):619-622
Oct 1962 421 J822
Chromatography, Insect repellents, Isomers, N,N-diethyltoluamide.

1806-67
CODISTILLATION OF DDT WITH WATER.
F Acree Jr M Beroza M C Bowman
J Agr Food Ch 11(4):278-280
Jul 1963 381 J8223
Distillation, DDT .

1807-67
DETERMINATION OF BUTYLATED HYDROXYANISOLE, BUTYLATED HYDROXYTOLUENE, AND ETHOXYQUIN IN HYDROCARBON-SOLUBLE SAMPLES.
W J Alicino H C Klein J J Quattrone Jr T K Choy
J Agr Food Ch 11(6):496-498, TA8S.
Nov 1963 381 J8223
Butylated hydroxyanisole, Butylated hydroxytoluene, Ethoxyquin.

1808-67
ARCARICIDE BIOASSAY: TWO ORGANISMS SUITABLE FOR BIOASSAYING SPECIFIC ACARICIDES.
S Areekul R F Harwood
J Agr Food Ch 8(1):32-36, TA8S.
Jan 1960 381 J8223
Acaricides, Artemia salina Leach, Biological assay, Tyrophagus putrescentiae Schrank.

1809-67
THE HYDROXYLATION OF NAPHTHALENE-1-C14 BY HOUSE FLY MICROSOMES.
R O Arias L C Terriere
J Econ Entom 55(6):925-929
Dec 1962 421 J822
Hydroxyl, Microsomes, Musca domestica, Musca domesticus, Naphthalene.

1810-67
THE METABOLISM OF DEHYDROACETIC ACID (DHA). .
T E Barman D V Parke R T Williams
Toxicol Appl Pharmac 5:545-568
1963 391.8 T662
Dehydroacetic acid, Metabolism.

1811-67
FEED ADDITIVES ANALYSIS: MICROANALYSIS OF PIPERAZINE.
H F Beckman L Feldman
J Agr Food Ch 8(3):227-228
May 1960 381 J8223
Feed additives, Microanalysis, Piperazine.

1812-67
SPECIFICITY OF DIARYLHALOETHANE-DEHYDROHALOGENASE OF SUSCEPTIBLE AND DDT-RESISTANT HOUSE FLIES.
R S Berger R G Young
J Econ Entom 55(4):533-536, TA8S.
Aug 1962 421 J822
Chemistry, Diarylhaloethane-dehydrohalogenase, DDT , Musca domestica, Musca domestica.

1813-67
OBSERVATIONS ON THE MECHANISM OF ACTION AND ON THE QUANTITATIVE ASSAY OF ICHTHYOTOXIN FROM PRYMNESIUM PARVUM CARTER.
F Bergmann I Parnas K Reich
Toxicol Appl Pharmac 5:637-649
1963 391.8 T662
Ichthyotoxin, Prymnesium parvum, Quantitative analysis.

1814-67
NEW APPROVED COMMON NAMES OF INSECTICIDES. III. .
S C Billings
J Econ Entom 55(5):822
Oct 1962 421 J822
Chemicals, Insecticides, Nomenclature.

1815-67
SYNTHESIS AND INSECTICIDAL ACTIVITY OF O-METHYL O-(2,4,5-TRICHLOROPHENYL) PHOSPHORAMIDOTHIOATES AND RELATED COMPOUNDS.
E H Blair R C Kauer E E Kenaga
J Agr Food Ch 11(3):237-240
May 1963 381 J8223
Biological activity, Insecticide synthesis, O-methyl o-(2,4,5-trichlorophenyl) phosphoramidothioates.

1816-67
HERBICIDE UPTAKE AND DISTRIBUTION: SYNTHESIS OF CARBON -14-LABELED DALAPON AND TRIAL APPLICATIONS TO SOYBEAN AND CORN PLANTS.
F A Blanchard W W Muelder G N Smith
J Agr Food Ch 8(2):124-128
Mar 1960 381 J8223
C-14, Chemical synthesis, Corn, Insecticide application, Sodium dalapon, Soybeans.

1817-67
INSECTICIDE SOLUBILITY: SOLUBILITY OF CARBON-14 DDT IN WATER.
M C Bowman F Acree Jr
J Agr Food Ch 8(5):406-408
Sep 1960 381 J8223
C-14, DDT , Solubility, Water.

1818-67
FOOD ANTIOXIDANTS:DETERMINATION OF BUTYLATED HYDROXYANISOLE AND BUTYLATED HYDROXYTOLUENE IN POTATO GRANULES BY GAS-LIQUID CHROMATOGRAPHY.
R G Buttery B N Stuckey
J Agr Food Ch 9(4):283-285
Jul 1961 381 J8223
Butylated hydroxyanisole, Butylated hydroxytoluene, Chromatography, Potatoes.

1819-67
INSECTICIDE ASSAY:CHROMATOGRAPHIC SEPARATION OF ACTIVE COMPONENTS OF NATURAL PYRETHRINS AND THEIR CHARACTERIZATIONS.
S C Chang
J Agr Food Ch 9(5):390-394, BIBL. 394
Sep 1961 381 J8223
Chromatography, Pyrethrum.

1820-67
ANTIFUNGAL ACTIVITY OF SUBSTITUTED NITROANILINES AND RELATED COMPOUNDS.
N G Clark A F Hams
J Sci Food A 12(11):751-757
Nov 1961 382 S012
Fungicides, Nitroanilines.

1821-67
THE ESTIMATION OF MIXTURES OF DDT AND BHC ISOMERS USING INFRARED DIFFERENTIAL NULL-ANALYSIS.
B Cleverley
Anal Ch 33(11):1621-1623
Oct 1961 381 J825A
Benzene hexachloride, Benzene hexachloride, Differential null-analysis, Infrared spectra, Isomerism, DDT .

1822-67
SYSTEMIC FUNGICIDES.
R J W Cremlyn
J Sci Food A 12(12):805-811, BIBL. 811-812
Dec 1961 382 S012
Fungicides, Systemic fungicides.

1823-67
THE SYNTHESIS OF TERTIARY CARBON DEUTERATED DDT AND DDT ANALOGS.
A C Dachauer B Cocheo M G Solomon D J Hennessy
J Agr Food Ch 11(1):47-50
Jan 1963 381 J8223
Deuterium, DDT .

1824-67
TWO FUNGICIDALLY ACTIVE 5-CHLORO-4-ARYL-1,2-DITHIOL-3-ONES DERIVED FROM CUMENE AND P-CYMENE.
W R Diveley K Brack A D Lohr
J Agr Food Ch 12(3):251-253
May 1964 381 J8223
p-cymene, Cumene, Fungicides, 5-chloro-4-aryl-1,2-dithiol-3-one.

I82S-67
CAR8AMATE INSECTICIDES: SYNERGISM 8Y ORGANOTHIOCYANATES.
A H Ei-Sebae R L Metcalf T R Fukuto
J Econ Entom 57(4):478-482, TA8S.
Aug 1964 421 J822
Carbamates, Insecticide synergists, Musca domestica L..

1826-67
THE META8OLISM OF S-PROPYL-1-C14 N-8UTYLETHYLTHIOCAR8AMATE (TILLAM-C14) IN RATS.
S C Fang M George V H Freed
J Agr Food Ch 12(1):37-40, TA8S.
Jan 1964 381 J8223
Animal metabolism, Herbicides, Rats, S-propyl-1-CI4 n-butylethylthiocarbamate.

1827-67
ISOTOPE-LA8ELED 1NSECTICIDES:ETH1ON-P32-2.
S E Forman 8 L Gilbert
J Agr Food Ch 9(4):260-262
Jul 1961 381 J8223
Ethion, Isotopes.

1828-67
SYMPOSIUM ON META8OLISM OF HER81CIDES.
V H Freed
J Agr Food Ch 12(1):2
Jan 1964 381 J8223
Herbicides, Metabolism, Symposia.

1829-67
CAR8AMATE INSECTICIDES: INSECTICIDAL PROPERTIES OF SOME OPTICALLY ACTIVE SU8STITUTED PHENYL-IN-METHYLCAR8AMATES.
T R Fukuto R L Metcalf M Y Winton
J Econ Entom S7(1):10-12
Feb 1964 421 J822
Carbamates, Insecticides.

I831-67
NUCLEAR MAGNETIC RESONANCE IN THE EXAMINATION OF THE THERMAL DECOMPOSITION OF O,O-DIMETHYL O(4-(METHYLTHIO)-3-TOLYL) PHOSPHOROTHIOATE.
T R Fukuto E O Hornig R L Metcalf
J Agr Food Ch 12(2):169-171
Mar 1964 381 J8223
Fenthion, Nuclear magnetic resonance, Plant metabolism.

1832-67
INSECTICIDAL PROPERTIES OF SOME DIETHYL NITRONAPHTHYL PHOSPHATES.
T R Fukuto R L Metcalf M Frederickson M Y Winton
J Agr Food Ch 12(3):228-231
May 1964 381 J8223
Diethyl nitronaphthyl phosphates, Musca domestica, Musca domestica L..

1833-67
INSECTICIDE MEASUREMENT: DETERMINATION OF TOXAPHENE 8Y A SPECTROPHOTOMETRIC DIPHENYLAMINE PROCEDURE.
A J Graupner C L Dunn
J Agr Food Ch 8(4):286-289, TA8S.
Jul 1960 381 J8223
Diphenylamine, Spectrophotometry, Toxaphene.

1834-67
ISOTOPE-LA8ELED INSECTICIDES:PREPARATION OF LA8ELED 2-ETHYLTHIOETHANOL, A DEMETON INTERMEDIATE.
K Groves R Haguwitz
J Agr Food Ch 9(4):262-263
Jul 1961 381 J8223
Demeton, Insecticides, Isotopes, 2-ethylthioethanol.

183S-67
SOME CHEMICAL CHARACTERISTICS OF A DDT-INDUCED NEUROACTIVE SU8STANCE FROM COCKROACHES AND CRAYFISH.
W 8 Hawkins J Sternburg
J Econ Entom S7(2):241-247, PL.
Apr I964 421 J822
8lattidae, 8lattidae, Crayfish, DDT .

1836-67
SOIL FUMIGANT DETERMINATION: EXTRACTION AND DETERMINATION OF ETHYLENE DI8ROMIDE IN SOILS.
J J Jurinak A L 8rown P E Martin
J Agr Food Ch 8(2):113-11S, TA8S.
Mar I960 381 J8223
Catalytic oxidation, Ethylene dibromide, Soil fumigation, Vacuum distillation.

1837-67
8IURET FORMATION 1N THE MANUFACTURE OF UREA.
P J C Kaasenbrood P J van den 8erg L J Revallier
J Agr Food Ch 11(1):39-43, TA8S.
Jan 1963 38I J8223
Ammonia, 8iuret, Fertilizers, Urea.

1838-67
1NSECTICIDE ASSAY: ASSAY OF CO-RAL IN TECHNICAL MATERIAL AND FORMULATED PRODUCTS.
P F Kane C J Cohen W R 8etker D MacDougall
J Agr Food Ch 8(1):26-29, TA8S.
Jan 1960 381 J8223
Co-Ral, Coumaphos, Quantitative analysis.

1839-67
EFFECTS OF SOME SPRAY ADJUVANTS ON DDT EMULSIFIA8LE CONCENTRATE.
H Kido E M Stafford
J Econ Entom 59(2):4S4-460, TA8S.
Apr 1966 42I J822
DDT , Emulsifying agents.

1840-67
STERILIZATION OF AGAR MEDIA WITH PROPYLENE OXIDE.
W L Kiarman J Craig
Phytopathole S9(11):868
Nov 1960 464.8 P56
Agar, Culture media, Propylene oxide, Sterilization.

1841-67
SIMULTANEOUS QUANTITATIVE DETERMINATION OF LINDANE AND DDT GAS CHROMATOGRAPHY.
J R Koons H J Wesselman
J Agr Food Ch 12(6):550
Nov 1964 381 J8223
Chromatography, Insecticides, DDT , Lindane.

1842-67
SOME CONSIDERATIONS OF PRESENT 8IOSPHERIC CONTAMINATION 8Y RADIOACTIVE FALLOUT.
W H Langham
J Agr Food Ch 9(1):91-95
Mar 1961 381 J8223
8ioshere, Radioactive contamination.

1843-67
DETERMINATION OF ENDOGENOUS G188ERELLINS 1N GREEN MALT 8Y 1SOTOPIC, DERIVATIVE DILUTION PROCEDURES.
L Lazer W E 8aumgartner R V Dahlstrom
J Agr Food Ch 9(1):24-26
Jan 1961 381 J8223
Gibberellins, Isotopes, Malting barley.

1844-67
THE HALOGENATED ALIPHATIC ACIDS.
J K Leasure
J Agr Food Ch 12(1):40-43, 8I8L. 43
Jan 1964 38I J8223
Halogens, Herbicides, Organic compounds.

1845-67
SPREAD FACTOR VARIATION FOR OIL-8ASE, AERIAL SPRAYS.
8 Maksymiuk A D Moore
J Econ Entom S5(5):695-699
Oct I962 421 J822
Aerial spraying, Chemistry, Insecticides, Oils.

I846-67
INSECTICIDE TOXICITY: PREPARATION AND 8IOLOGICAL ACTIVITY OF A SERIES OF HALOGENATED ETHYL AND VINYL DIMETHYL PHOSPHATE ESTERS.
A M Mattson R W Fay T 8 Gaines G W Pearce
J Agr Food Ch 8(3):196-198, TA8S.
May 1960 381 J8223
Chemical synthesis, Dimethyl phosphate, Ethyl esters, Vinyl esters.

1847-67
THE FATE OF SULFURYL FLUORIDE 1N WHEAT FLOUR.
R W Meikle
J Agr Food Ch 12(S):464-467
Sep 1964 38I J8223
Flour, Sulfuryl fluoride, Wheat.

1848-67
DRYWOOD TERMITE META8OLISM OF VIKANE FUMIGANT AS SHOWN 8Y LA8ELED POOL TECHNIQUE.
R W Meikle D Stewart O A Globus
J Agr Food Ch 11(3):226-230, TA8S.

May 1963 3B1 JB223
Fumigants, Labeling, Termites, Vikane.

1B49-67
BIOASSAY OF A MICROBIAL INSECTICIDE CONTAINING SPORES OF BACILLUS THURINGIENSIS BERLINER.
J J Menn
J Invertebrate Path 2(2):134-138
1960 421 JB26
Bacillus thuringiensis Berliner, Biological assay, Insecticides, Plutella maculipennis (Curtis), Spores.

1B50-67
FACTORS INFLUENCING THE SYSTEMIC INSECTICIDAL ACTION OF SUBSTITUTED PHENYL DIMETHYL PHOSPHATES.
R L Metcalf H T Reynolds T R Fukuto C Collins
J Econ Entom 57(4):531-536, TABS.
Aug 1964 421 JB22
Phenyl dimethyl phosphates, Systemic insecticides.

1B51-67
THE FATE OF CYANAMIDE IN COTTON.
C S Miller W C Hall
J Agr Food Ch 11(3):222-225
May 1963 3B1 JB223
Cotton, Cyanamide, Metabolism.

1B52-67
THE COLORIMETRIC DETERMINATION AND PAPER CHROMATOGRAPHY OF SOME AROMATIC CARBAMATES.
R Miskus M E Eldefrawi D B Menzel W A Svoboda
J Agr Food Ch 9(3):190-192
May 1961 3B1 JB223
Carbamates, Chromatography, Colorimetry.

1B53-67
GIBBERELLIC ACID. XI.-- THE GROWTH-PROMOTING ACTIVITIES OF SOME FUNCTIONAL DERIVATIVES OF GIBBERELLIC ACID.
J S Moffatt M Radley
J Sci Food A 11(7):386-390
Jul 1960 3B2 SO12
Gibberellic acid.

1B54-67
THE RELATION BETWEEN BASICITY AND SELECTIVITY IN ORGANOPHOSOPHATES.
R D O Brien B D Hilton
J Agr Food Ch 12(1):53-55
Jan 1964 3B1 JB223
Amiton, Ionization, Organophosphates.

1B55-67
PURIFICATION OF PESTICIDES:MULTIMOLECULAR ADSORPTION CHROMATOGRAPHY FOR PURIFICATION OF GRAM QUANTITIES OF PESTICIDES.
G G Patchett G H Batch Elder
J Agr Food Ch 9(5):395-396
Sep 1961 3B1 JB223
Chromatography, Pesticides, Purification procedures.

1B56-67
FUNGICIDE EVALVATION: FUNGICIDAL ACTIVITY OF SOME NEW AMINO ALCOHOLS SYNTHESIZED FROM CITRUS ($)-LIMONENE.
R Patrick W F Newhall
J Agr Food Ch 8(5):397-399
Sep 1960 3B1 JB223
Alcohols, Chemical synthesis, Limonene.

1B57-67
MICROBIOLOGICAL DEGRADATION OF THIRAM.
L T Richardson G D Thorn
Phytopatholo 50(9):651-652
Sep 1960 464.8 P56
Microbiological degradation, Microbiology, Thiram.

1B58-67
AN ACID METHOD FOR THE VOLUMETRIC ESTIMATION OF WATER-SOLUBLE DITHIOCARBAMATES.
M L Shankaranarayana C C Patel
Anal Ch 33(10):1398-1400
Sep 1961 3B1 JB25A
Acids, Dithiocarbamates, Volumetric analysis, Water solubility.

1B59-67
RECOVERY OF ETHYLENE CHLOROBROMIDE FROM AGRICULTURAL PRODUCTS.
W B Sinclair D L Lindgren R Forbes
J Econ Entom 57(3):346-348
Jun 1964 421 J822
Bromochloroethane, Insecticide residues.

1B60-67
THE ISOLATION AND IDENTIFICATION OF THE AMINO-NITRO-O-TOLUAMIDE FORMED BY THE BIOLOGICAL REDUCTION OF 3,5-DINTRO-O-TOLUAMIDE.
G N Smith B J Theigs P D Ludwig
J Agr Food Ch 11(3):257-260
May 1963 3B1 JB223
Amino-nitro-o-toluamide, Feed, 3,5-dinitro-o-toluamide.

1B61-67
FEED ADDITIVES: DETERMINATION OF 3,5 DINITRO-O-TOLUAMIDE (ZOALENE) IN FEED CONCENTRATES.
G N Smith
J Agr Food Ch B(3):224-226, TABS.
May 1960 3B1 JB223
Feed additives, Feed concentrates, Zoalene.

1B62-67
IDENTIFICATION OF THE METABOLITES OF 3,5-DINITRO-O-TOLUAMIDE -C14 (ZOALENE) IN CHICKEN TISSUES.
G N Smith B J Theigs P D Ludwig
J Agr Food Ch 11(3):253-256
May 1963 3B1 JB223
Metabolites, Poultry meat, Zoalene, 3,5-dinitro-o-toluamide-C14.

1B63-67
THE IDENTIFICATION OF 3,5-DINITRO-O-TOLUAMIDE (ZOALENE) AND POSSIBLE METABOLITES BY PAPER CHROMATOGRAPHY.
G N Smith B J Theigs P D Ludwig
J Agr Food Ch 11(3):251-253
May 1963 3B1 JB223
Chromatography, Feed, Metabolites, Zoalene, 3,5-dinitro-o-toluamide.

1B64-67
INTEGRATION OF PHYSICO-CHEMICAL AND BIOLOGICAL TECHNIQUES IN SPECIFIC BIOASSAY, WITH SPECIFIC REFERENCE TO BIDRIN INSECTICIDE.
Yun-Pei Sun E R Johnson
J Econ Entom 58(5):838-844
Oct 1965 421 JB22
Bidrin, Biological assay, Insecticides.

1B65-67
FLUOROMETRIC ASSAY FOR GIBBERELLIC ACID.
R J Theiriault W C Friedland M H Peterson J C Sylvester
J Agr Food Ch 9(1):21-23
Jan 1961 381 JB223
Fluorometry, Gibberellic acid.

1B66-67
PETROLEUM FRACTIONS AS DDT SOLVENTS.
A M Thomas Jr
J Agr Food Ch 12(5):442-447, TABS.
Sep 1964 3B1 JB223
DDT , Petroleum.

1B67-67
THE METABOLISM OF DIMETHOATE BY VERTEBRATE TISSUES.
T Uchida W C Dauterman R D O Brien
J Agr Food Ch 12(1):48-52, TABS.
Jan 1964 3B1 JB223
Animal metabolism, Dimethoate.

1B68-67
DETERMINATION OF MERCURY IN MECURIAL AND ORGANOMERCURIAL PESTICIDES.
F Vernon
Anal Ch 33(10):1435-1436, TABS.
Sep 1961 381 JB25A
Organic compounds, Pesticides, Solvents.

1B69-67
THE QUANTITATIVE DETERMINATION OF HEPTACHLOR IN PESTICIDE FORMULATIONS BY GAS CHROMATOGRAPHY.
H J Wesselman J R Koons
J Agr Food Ch 11(2):173-174
Mar 1963 3B1 JB223
Chromatography, Heptachlor.

1B70-67
THE METABOLISM OF SEVIN IN DAIRY COWS.
W E Whitehurst E T Bishop F E Critchfield G G Gyrisco E W Huddleston H Arnold D J Lisk
J Agr Food Ch 11(2):167-169
Mar 1963 381 JB223
Carbaryl, Dairy cattle, Insecticide residues.

80 ENGINEERING

1871-67
IMPROVED HYDROSTATIC PRESSURE GAUGE METHODS FOR MEASURING OLEORESIN EXUDATION PRESSURE IN BARK BEETLE RESEARCH.
N H Anderson
Can Entom 96(10):1322-1327
Oct 1964 421 C16
Hydrostatics, Measuring equipment, Oleoresins, Scolytidae.

1872-67
PHOTOGRAPHY IN MITE COUNTING.
D Asquith
J Econ Entom 58(4):677-678
Aug 1965 421 J822
Mites, Photography, Sampling.

1873-67
A VERSATILE ALTERNATIVE CHAMBER FOR INSECT BEHAVIOUR STUDIES*
M D Atkins W G Wellington
Can Entom 94(4):428-433
Apr 1962 421 C16
Insect behavior, Insect cages.

1874-67
AERATED STEAM FOR SOIL TREATMENT.
K F Baker C M Olsen
Phytopathole 50(1):82
Jan 1960 464.8 PS6
Soil treatment, Steam.

1875-67
A VEHICLE-MOUNTABLE ROTARY-TUBE SPRAYER.
C S Barnharst Sr
J Econ Entom 55(3):411-412, PL.
Jun 1962 421 J822
Equipment, Insect diseases, Insect vectors, Spraying.

1876-67
A PHOTOGRAPHIC TECHNIQUE FOR RECORDING DISTRIBUTION AND LOSS OF INSECTICIDES ON CATTLE.
M L Beadles
J Econ Entom 59(4):1011
Aug 1966 421 J822
Cattle, Insecticide distribution, Insecticide loss, Photography.

1877-67
SOME FACTORS AFFECTING THE CATCHES OF LEPIDOPTERA IN LIGHT TRAPS.
P Belton R H Kempster
Can Entom 95(8):832-837
Aug 1963 421 C16
Lepidoptera, Light traps.

1878-67
IDENTIFICATION OF 3, 4-METHYLENEDIOXYPHENYL SYNERGISTS BY THIN-LAYER CHROMATOGRAPHY.
M Beroza
J Agr Food Ch 11(1):S1-S4, BIBL. S3-54
381 J8223
Chromatography, Insecticide synergists, 3,4-methylenedioxyphenyl.

1879-67
USE OF STEP-ON SWITCHES FOR CONTROL OF AUTOMATIC SPRAYERS.
I L Berry R A Hoffman
J Econ Entom 56(6):888-890
Dec 1963 421 J822
Electric switches, Spraying equipment.

1880-67
GAS CHROMATOGRAPHY RETENTION TIMES AND SENSITIVITY DATA FOR INSECTICIDES AND HERBICIDES.
E J Bonelli H Hartmann K P Dimick
J Agr Food Ch 12(4):333-336, TABS.
Jul 1964 381 J8223
Chromatography, Herbicides, Insecticides.

1881-67
A PORTABLE APPARATUS FOR SEPARATING FLY LARVAE FROM POULTRY DROPPINGS.
H W Brydon R G Fuller
J Econ Entom 59(2):448-452
Apr 1966 421 J822
Diptera, Fannia spp., Insect collecting equipment, Poultry manure.

1882-67
A SPEAR FOR SAMPLING BULK GRAIN BY SUCTION.
H D Burges
Bull Entomol R 51(1):1-6
Apr 1960 421 B87
Grain, Grain sampling, Sampling, Spear, Suction traps.

1883-67
A ROTARY DISC DEVICE FOR APPLYING ULTRA-LOW-VOLUME (UNDILUTED) PESTICIDES WITH GROUND EQUIPMENT.
E C Burt D B Smith E P Lloyd
J Econ Entom 59(6):1487-1490
Dec 1966 421 J822
Pesticide application, Spraying.

1884-67
MODIFICATIONS OF A LEPIDOPTEROUS LARVAE DISPENSER FOR A PACKAGING MACHINE.
R L Burton E A Harrell
J Econ Entom 59(6):1544-1545
Dec 1966 421 J822
Insect rearing equipment.

1885-67
AN AUTOMATED PACKAGING MACHINE FOR LEPIDOPTEROUS LARVAE.
R L Burton H C Cox
J Econ Entom 59(4):907-909, PL.
Aug 1966 421 J822
Lepidopterous larvae, Packaging machine, Spodoptera frugiperda.

1886-67
DEVICES TO FACILITATE REARING OF LEPIDOPTEROUS LARVAE.
R L Burton E A Harrell H C Cox W W Hare
J Econ Entom 59(3):594-596
Jun 1966 421 J822
Insect rearing techniques, Larvae, Lepidoptera.

1887-67
AN INSECT FLIGHT TRAP FOR CROP AREAS.
G D Butler Jr
J Econ Entom 59(4):1030-1031, PL.
Aug 1966 421 J822
Insect collecting equipment.

1888-67
AN IMPROVED METHOD FOR STORAGE OF THE ALFALFA WEEVIL IN THE LABORATORY.
H D Byrne
J Econ Entom 58(6):1161
Dec 1965 421 J822
Experimental insects, Hypera postica, Hypera postica (Gyllenhal), Insect rearing equipment.

1890-67
A PRECISION SPRAY TECHNIQUE FOR EVALUATING OILS FOR SIGATOKA DISEASE CONTROL ON INDIVIDUAL BANANA LEAVES IN THE FIELD.
L Calpouzos W A Brun T Theis C Colberg
Phytopatholo 50(1):69-72
Jan 1960 464.8 PS6
Bananas, Oils, Sigatoka leaf-spot disease, Spray technique.

1891-67
APPARATUS AND PROCEDURE FOR SEPARATION OF CORN ROOTWORM EGGS FROM SOIL.
J H Chandler G J Musick M L Fairchild
J Econ Entom 59(6):1409-1410
Dec 1966 421 J822
Diabrotica, Diabrotica longicornis, Diabrotica virgifera, Eggs, Insect collecting equipment.

1892-67
ADHESIVES FOR HOLDING MITES TO GLASS PLATES.
M L Cleveland
J Econ Entom 55(4):570-571
Aug 1962 421 J822
Adhesives, Laboratory equipment, Mites.

1893-67
PLASTER OF PARIS AS AN AID IN REARING INSECTS PUPATING IN THE SOIL.
R V Connin D L Cobb M S Gomulinski J C Arnsman
J Econ Entom 59(6):1530
Dec 1966 421 J822
Insect rearing equipment, Pupae.

1894-67
A MODIFIED PHOTOPERIOD CONTROL DEVICE.
W R Cothran G G Gyrisco
J Econ Entom 59(1):236-238
Feb 1966 421 J822
Hypera postica, Photoperiodism.

1895-67
A HEATING APPARATUS FOR CONDUCTING FEEDING EXPERIMENTS WITH BLOOD-SUCKING MITES.
H F Cross
J Econ Entom 55(1):140-142
Feb 1962 421 J822
Feeding, Heating apparatus, Mites.

1896-67
COLOR CHART FOR MARKING INSECTS.
W H Cross H C Mitchell
J Econ Entom 57(2):301
Apr 1964 421 J822
Insect identification.

1897-67
A CYCINDRICAL CAGE FOR FLY REARING.
E C Cummings J T Hallett J J Menn
J Econ Entom 57(1):177, PL.
Feb 1964 421 J822
Insect rearing equipment, Musca domestica.

1898-67
A TWO-BOTTOM TWO-WAY PLOW SOLE FUMIGATOR.
C E Dallimore
Phytopatholo 50(1):83
Jan 1960 464.8 P56
Fumigation, Plows.

1899-67
AN APPARATUS FOR CONTINUOUSLY RECORDING APHID FLIGHTS FROM THEIR HOSTS.
R Davis
J Econ Entom 58(5):1034-1035
Oct 1965 421 J822
Aphididae, Flight patterns, Insect flight.

1900-67
PORTABLE SPRAYER FOR AERIAL LVC APPLICATIONS.
A V Dearman H F Powell R K Thompson
J Econ Entom 58(6):1050-1052
Dec 1965 421 J822
Aircraft disinfestation, Low-volume concentrate, Spraying equipment.

1901-67
AN EASILY CONSTRUCTED VACUUM DUSTER.
P H Dunn B J Mechalas
J Econ Entom 56(6):899
Dec 1963 421 J822
Dusting equipment.

1902-67
NEW SPRAY REAGENTS FOR THE DETECTION OF THIOPHOSPHATE INSECTICIDES ON PAPER CHROMATOGRAMS.
M C Dutt D H Seow
J Agr Food Ch 11(6):467
Nov 1963 381 J8223
Chromatography, Spraying, Thiophosphates.

1903-67
TEFLON AS A BARRIER TO INSECTS.
W Ebeling R E Wagner
J Econ Entom 56(5):715-716
Oct 1963 421 J822
Laboratory equipment, Teflon.

1904-67
A CAGE FOR COLLECTING INSECTS FROM TREE STEMS AND BRANCHES.
D P Elliott J M Powell
Can Entom 98(10):1112-1113
Oct 1966 421 C16
Insect cages, Insect collecting equipment, Trees.

1905-67
IMPROVED METHOD OF USING YELLOW-PAN APHID TRAPS.
D A Evans J T Medler
J Econ Entom 59(6):1526-1527
Dec 1966 421 J822
Aphididae, Insect collecting equipment.

1906-67
A PAPER-BAG TEST CAGE FOR USE WITH THE TOBACCO BUDWORM.
H M Flint C K Lahren
J Econ Entom 59(6):1540-1541
Dec 1966 421 J822
Heliothis virescens, Heliothis viscerens, Insect collecting equipment.

1907-67
SIMPLIFIED METHODS FOR LABORATORY MAINTENANCE OF SALTATORY ORTHOPTERA.
H Frings M Frings
J Econ Entom 55(6):1019-1020
Dec 1962 421 J822
Insect cages, Insect rearing, Insect rearing equipment, Orthoptera.

1908-67
METHODS FOR PLACING WASP TRAP NESTS IN ELEVATED LOCATIONS.
R E Fye
J Econ Entom 58(4):803-804
Aug 1965 421 J822
Hymenoptera, Hymenoptera, Insect traps.

1909-67
A POWER TOOL FOR SAMPLING SOIL FOR INSECTS.
K E Gibson
J Econ Entom 58(4):788-790
Aug 1965 421 J822
Insects, Soil sampling.

1910-67
EVALUATION OF A BLOWER ATTACHMENT FOR LIGHT TRAPS.
P A Glick H M Graham C H Billingsley
J Econ Entom 57(1):169-170, PL.
Feb 1964 421 J822
Light traps.

1911-67
KILLING HOUSE-FLIES, MUSCA DOMESTICA L., BY MEANS OF HANGING DROPS OF INSECTICIDE.
K G Gostick P S Hewlett
Bull Entomol R 51(3):523-532
Nov 1960 421 B87
Diptera, Insecticide application, Insecticide residues, Insecticides, Musca domestica.

1912-67
AN OLFACTOMETER FOR USE IN THE STUDY OF MOSQUITO ATTRACTANTS.
H K Gouck C E Schreck
J Econ Entom 58(3):589-590
Jun 1965 421 J822
Attractants, Culicidae, Olfactometers.

1913-67
USE OF CYANIDE IN PINK BOLLWORM SEX-LURE TRAPS.
H M Graham D F Martin
J Econ Entom 56(6):901-902
Dec 1963 421 J822
Cyanides, Insect traps, Pectinophora gossypiella, Pectinophora gossypiella (Saunders), Sex attractants.

1914-67
A SMALL CAGE FOR THE COLLECTION OF INSECT EXCRETA.
E A C Hagley
J Econ Entom 55(2):261
Apr 1962 421 J822
Equipment, Excreta, Insect cages.

1915-67
DUSTING STATIONS AND CABLE BACKRUBBERS AS SELF-APPLICATORY DEVICES FOR CONTROL OF THE FACE FLY.
J A Hair T R Adkins Jr
J Econ Entom 58(1):39-41
Feb 1965 421 J822
Backrubbers, Dusting, Insect control, Insecticides, Musca autumnalis, Musca autumnalis DeGeer.

1916-67
A LABORATORY TECHNIQUE FOR BIOASSAY OF PLANT ATTRACTANTS FOR THE BOLL WEEVIL.
D D Hardee E B Mitchell P M Huddleston T B Davich

80 1917-67

J Econ Entom 59(1):240-241
Feb 1966 421 J822
Anthonomus grandis, Anthonomus grandis Boheman,
Biological assay, Plant attractants.

1917-67
A WALK-IN LIGHT TRAP INSTALLATION WITH A MOTH-BEETLE SEPARATOR.
K Harendorf A J Keaster
J Econ Entom 58(5):1010-1011
Oct 1965 421 J822
Coleoptera, Light traps, Moths.

1918-67
A FAN FOR HANDLING LIVE INSECTS.
E A Harrel W W Hare J R Young
J Econ Entom 59(3):756-758
Jun 1966 421 J822
Insect collecting equipment.

1919-67
AN INEXPENSIVE PORTABLE SUCTION INSECT SAMPLER.
E Harrell R Davis
J Econ Entom 58(4):791-792
Aug 1965 421 J822
Insect collecting equipment, Insects, Sampling.

1920-67
GROUND EQUIPMENT FOR APPLYING LOW-VOLUME INSECTICIDES TO SWEET CORN.
E A Harrell W W Hare J R Young
J Econ Entom 59(2):487-489
Apr 1966 421 J822
Insecticides, Spraying equipment, Sweetcorn.

1921-67
AN EFFECT OF ELECTROSTATIC DUSTING ON DDT DUST DEPOSITION.
E A Harrell M C Bowman W W Hare
J Econ Entom 58(5):1016-1017
Oct 1965 421 J822
Electrostatic dusting, DDT .

1922-67
A MODIFIED HIGH-CLEARANCE SPRAYER FOR PLOT USE.
K Harrendorf
J Econ Entom 58(5):1014-1015
Oct 1965 421 J822
Spraying, Spraying equipment.

1923-67
A DISPENSING PUMP FOR VISCOUS FORMULATIONS OF LURE.
W G Hart M S Fujimoto
J Econ Entom 59(6):1544
Dec 1966 421 J822
Attractants, Spraying equipment.

1924-67
NEW DEVICES FOR REARING AND HANDLING HOUSE FLIES IN THE LABORATORY.
S B Hays G M Amerson
J Econ Entom 59(6):1523-1524
Dec 1966 421 J822
Insect rearing equipment, Musca domestica, Musca domestica.

1925-67
MODIFICATION OF A LABORATORY REARING METHOD FOR THE PLUM CURCULIO, CONOTRACHELUS NENUPHAR.
S B Hays J H Cochran
J Econ Entom 57(3):408-409, BIBL.
Jun 1964 421 J822
Conotrachelus nenuphar, Conotrachelus nenuphar,
Insect rearing equipment.

1926-67
PRECISION EQUIPMENT FOR APPLYING GRANULAR FORMULATIONS IN INSECTICIDE TESTS.
C F Henderson
J Econ Entom 55(5):663-667
Oct 1962 421 J822
Equipment, Granular insecticides, Insecticide application.

1927-67
A SIMPLE TECHNIQUE FOR TRITIATION OF AROMATIC INSECTICIDES.
B D Hilton R D O Brien
J Agr Food Ch 12(3):236-238
May 1964 38I J8223
Insecticides, Labeling, Tritium.

1928-67
AN INSECT-PROOF DOORWAY.
B Hocking
Bull Entomol R 51(1):135-144
Apr 1960 421 887
Doors.

1929-67
TRAP FOR SEPARATING COLLECTIONS OF INSECTS BY INTERVAL.
W R Horsfall
J Econ Entom 55(5):808-811
Oct 1962 421 J822
Insect collecting equipment, Insect traps.

1930-67
ELECTRON MICROSCOPE STUDY ON THE CYTOLOGY OF A MICROSPORIDIAN SPORE BY MEANS OF ULTRATHIN SECTIONING.
A Huger
J Invertebrate Path 2(2):84-103, BIBL. 104-105
1960 421 J826
Cytology, Electron microscopes,
Locusta migratoria migratorioides Reiche and Fairmaire,
Microsporidian spores, Microtomy, Nosema locustae Canning.

1931-67
A LIGHT-WEIGHT LEAF CAGE FOR SMALL ARTHROPODS.
P R Hughes R E Hunter T F Leigh
J Econ Entom 59(4):1024-1025, PL.
Aug 1966 421 J822
Arthropoda, Leaf cage.

1932-67
FURTHER OBSERVATIONS ON THE EFFECTIVENESS OF CHEMICALLY TREATED SCREENS IN KILLING BITING MIDGES, CULICOIDES SANGUISUGA (DIPTERA: CERATODOGONIDAE).
H Jamnback
J Econ Entom 56(5):719-720
Oct 1963 421 J822
Ceratopogonidae, Ceratopogonidae,
Culicoides sanguisuga (Coquillett), Diptera, Screens.

1933-67
AN AUTOMATIC SAMPLE-CHANGING DEVICE FOR LIGHT-TRAP COLLECTING.
E W King C D Piess J K Reed
J Econ Entom 58(1):170-172
Feb 1965 421 J822
Insect collecting equipment, Sampling.

1934-67
RUBBER-BULB ASPIRATORS TO HANDLE MINUTE INSECTS.
R L Kirkpatrick
J Econ Entom 55(3):411
Jun 1962 421 J822
Eggs, Equipment, Insects, Larvae.

1935-67
THE AUTOMATIC MEASUREMENT OF FUMIGANT CONCENTRATIONS.
M J Kolbezen C W Wilson J W Eckert
Phytopatholo 50(9):642
Sep 1960 464.8 P56
Fumigants, Measurement.

1936-67
AN APHID FLIGHT CHAMBER: CONSTRUCTION AND OPERATION.
J B Kring
J Econ Entom 59(6):1518-1520
Dec 1966 421 J822
Aphididae, Insect flight chamber.

1937-67
EQUIPMENT FOR CHECKING FUMIGATION EFFECTIVENESS IN SILO BINS*
G W Lammers R C Dobson
J Econ Entom 58(5):1011-1012
Oct 1965 421 J822
Equipment, Fumigation, Silos.

1938-67
GROWING SEEDLINGS FREE OF AIR-BORNE MICROFLORA.
C Leben
Phytopatholo 50(9):644
Sep 1960 464.8 P56
Microflora, Plant physiology, Seedlings.

1939-67
TESTS WITH ATTRACTANTS AND A SIMPLE TRAP FOR THE EUROPEAN EARWIG, FORFICULA AURICULARIA.
E F Legner D W Davis
J Econ Entom 55(6):1006-1007
Dec 1962 421 J822

Attractants, 8aits, Forficuia auricuiaria, Forficula auricuiaria, Insect traps.

1940-67
AN 1MPROVED TU8E CLOSURE FOR 8IOLOGICAL TESTS.
P C Lippoid
J Econ Entom 59(3):626-628
Jun 1966 421 J822
8iological assay, Drosophiia melanogaster, Test tube closures.

1941-67
A TECHNIQUE FOR MAKING HIGH-RESOLUTION CONTINUOUS-TONE PHOTOGRAPHS OF NEMATODES.
H H Lyon W F Mai
Phytopatholo 50(9):644
Sep 1960 464.8 P56
Nematodes, Photography.

1942-67
A RAPID METHOD OF ESTIMATING THE ATOMIZATION OF OIL-8ASE AERIAL SPRAYS.
8 Maksymiuk
J Econ Entom 57(1):16-19
Feb 1964 421 J822
Aerlai spraying, Oli-base aerial sprays, Spray atomization.

1943-67
8AITED TRAPS FOR SAMPLING DROSOPHILA POPULATIONS IN TOMATO FIELD PLOTS.
H C Mason
J Econ Entom 56(6):897-899
Dec 1963 421 J822
Drosophiia, Insect traps, Tomatoes.

1944-67
FLOTATION TECHNIQUE FOR EXTRACTING EGGS OF DIA8ROTICA SPP. AND OTHER ORGANISMS FROM SOIL.
J W Matteson
J Econ Entom 59(1):223-224
Feb 1966 421 J822
Diabrotica spp., Extraction techniques, Insect eggs, Soil fauna.

1945-67
A MODIFIED ASPIRATOR FOR COLLECTING SMALL ARTHROPODS.
J W Matteson
J Econ Entom 58(5):1031-1031
Oct 1965 421 J822
Arthropoda, Aspirator, Insect collecting equipment.

1946-67
AN EFFECT OF STATIC ELECTRICITY ON CAPTURES IN INSECT TRAPS.
M G Maw
Can Entom 96(11):1482
Nov 1964 421 C16
Insect traps, Static electricity.

1947-67
A METAL CAGE FOR REARING GRASSHOPPERS.
P C Mazuranich F T Cowan
J Econ Entom 59(1):232-234
Feb 1966 421 J822
Camnula pellucida (Scudder), Grasshoppers, Insect cages, Insect rearing, Melanoplus bivittatus (Say), Melanoplus differentialis (Thomas), Melanoplus sanguinipes (F.).

1948-67
A LA8ORATORY INSECTICIDE SPRAYER DESIGNED TO SIMULATE FIELD SPRAYING EGUIPMENT.
S McDonald N W Hall
J Econ Entom 58(4):739-742
Aug 1965 421 J822
Insecticides, Spraying equipment.

1949-67
APPARATUS FOR STUDYING FEEDING AND OVIPOSITION 8Y ANGOUMOIS GRAIN MOTH ADULTS.
R 8 Mills
J Econ Entom 58(1):177
Feb 1965 421 J822
Feeding, Insect eggs, Sitotroga cerealeiia, Sitotroga cerealella.

1950-67
A SQUEEZE DEVICE FOR DETECTION OF LARVAE OF THE SORGHUM MIDGE, CONTARINIA SORGHICOLA (COQUILLET).
E Montoya
J Econ Entom 58(5):938-940
Oct 1965 421 J822
Contarinia sorghicoia, Larvae.

1951-67
PRECISION OF ATOMIZATION ESTIMATES FOR AERIAL SPRAYS.
A D Moore 8 Maksymiuk D A Isler
J Econ Entom 57(1):19-21
Feb 1964 421 J822
Aerlai spraying, Spray atomization.

1952-67
TRAPPING AS A MEANS OF STUDYING THE GAME TSETSE, GLOSSINA PALLIDIPES AUST.
K R S Morris
8uii Entomol R 51(3):533-558
Nov 1960 421 887
Glossina pallidepes Aust., Insect traps.

1953-67
A MACHINE FOR CHANGING THE POSITIONS OF A PAIR OF DIRECTIONAL LIGHT TRAPS TO ELIMINATE POSITIONAL EFFECTS.
C F Nicholls
Can Entom 94(2):200-204
Feb 1962 421 C16
Insect traps, Striduiation.

1954-67
AN EXPANDA8LE CAGE FOR FEEDING TESTS OF COCCINELLID PREDATORS OF APHIDS.
C F Nicholls J A C 8erube
J Econ Entom 58(6):1169-1170
Dec 1965 421 J822
Aphididae, Aphidiidae, Coccinellida, Insect cages, Predaceous insects.

1955-67
A PLOT SEEDER MODIFIED TO APPLY SEED AND GRANULAR INSECTICIDES SIMULTANEOUSLY.
H D Niemczyk G Prins
J Econ Entom 56(4):529
Aug 1963 421 J822
Insecticide application, Seed planting equipment.

1956-67
HAND SEEDER ADAPTED FOR PRECISION PLANTING OR FOR APPLICATION OF GRANULATED INSECTICIDES OR FERTILIZERS.
J A Onsager
J Econ Entom 59(4):1018-1019, PL.
Aug 1966 421 J822
Fertilizer spreaders, Hand seeder, Insecticide application, Precision planting.

1957-67
AN ECONOMICAL METHOD OF MAINTAINING ADULT DIPTERA.
A W Osborn E Shipp
J Econ Entom 58(5):1023
Oct 1965 421 J822
Diptera, Insect cages, Insect rearing.

1958-67
ARTIFICIAL OVIPOSITION DEVICES FOR APPLE MAGGOT.
R J Prokopy
J Econ Entom 59(1):231-232
Feb 1966 421 J822
Oviposition, Rhagoletis pomonella, Rhagoletis pomonella (Walsh).

1959-67
SAMPLING MITES ON PEACH LEAVES WITH THE HENDERSON-MC8URNIE MACHINE.
W L Putman
J Econ Entom 59(1):224-225
Feb 1966 421 J822
Henderson-Mc8urnie machine, Leaves, Mites, Panonychus ulmi, Panonychus ulmi (Koch), Peaches, Sampling.

1960-67
THE USE OF FLUON TO PREVENT THE ESCAPE OF STORED-PRODUCT INSECTS FROM GLASS CONTAINERS.
S Radinovsky G W Krantz
J Econ Entom 55(5):815-816
Oct 1962 421 J822
Glass containers, Polytetrafluoroethylene, Polytetrafluoroethylene, Stored product insects.

1961-67
A LIGHT TRAP FOR MOTHS OF NACOLEIA DICEMENALIS.
S 8 Rao
J Econ Entom 58(5):1000-1002
Oct 1965 421 J822

80 1962-67

Light traps, Moths, Nacoleia diemenalis.

1962-67
A BLOWER-AUGUR METERING GRANULAR APPLICATOR.
R C Riley D J Sutherland J H Simpson
J Econ Entom 58(1):121-124
Feb 1965 421 J822
Insecticide application.

1963-67
TESTS WITH TRAP DESIGN AND KILLING AGENTS IN BLACK-LIGHT SURVEY TRAPS.
G G Rohwer S A Rohwer II
J Econ Entom 57(2):301-302
Apr 1964 421 J822
Insecticides, Light traps.

1964-67
GROUND-APPLIED INSECTICIDES AGAINST THE CEREAL LEAF BEETLE.
R F Ruppel Y M Yun
J Econ Entom 58(1):41-46
Feb 1965 421 J822
Cereal leaf beetle, Insecticide application, Insecticides, Oulema melanopa (L).

1965-67
USE OF FIELD BAIT STATIONS IN CHEMOSTERILANT CONTROL OF THE MEXICAN FRUIT FLY.
M Sanchez Riviello J G Shaw
J Econ Entom 59(3):753-754
Jun 1966 421 J822
Anastrepha ludens, Anastrepha ludens, Baits, Chemosterilants.

1966-67
PORTABLE BLACK-LIGHT TRAP BATTERY AND AC OPERATION.
M H Sartor J C Oertel
J Econ Entom 56(4):536
Aug 1963 421 J822
Light traps.

1967-67
APPLICATION OF DIRECT PHOTOMETRY TO AGRICULTURAL ANALYSIS.
R O Scott
J Sci Food A 11(10):584-592
Oct 1960 382 SO12
Agricultural chemistry, Photometry, Spectrometry.

1968-67
DESIGN AND PERFORMANCE OF A LABORATORY AIR-BLAST SPRAYER.
W A Simanton K Trammel
J Econ Entom 58(3):576-578
Jun 1965 421 J822
Citrus, Spraying equipment.

1969-67
A SIMPLE AND INEXPENSIVE TRACTOR-MOUNTED INOCULUM APPLICATOR*
W R Sitterly G L Buckner Jr
Plant Dis R 44(7):532-533
15 Jul 1960 1.9 P69P
Immunization, Inoculum applicator, Tractors.

1970-67
SIMPLE APPARATUS FOR COMBUSTION OF SAMPLES CONTAINING C14-LABELED PESTICIDES FOR RESIDUE ANALYSIS.
G N Smith P D Ludwig R C Wright W R Bauriedel
J Agr Food Ch 12(2):172-175
Mar 1964 381 J8223
Combustion, Pesticide residues.

1971-67
A CARBON DIOXIDE TRAP FOR SIMULIIDAE (DIPTERA).
E L Snoddy K L Hays
J Econ Entom 59(1):242-243
Feb 1966 421 J822
Diptera, Insect traps, Simuliidae.

1972-67
A HOLDING CAGE AND HANDLING DEVICE FOR NOCTUID MOTHS.
J N Snow
J Econ Entom 59(6):1547-1548
Dec 1966 421 J822
Heliothis zea, Insect cages, Moths, Spodoptera frugiperda.

1973-67
A MICROCHAMBER FOR REPLICATING PHOTOPHASES IN DIAPAUSE STUDIES WITH THE EUROPEAN CORN BORER.
A N Sparks
J Econ Entom 59(2):492-493, PL.
Apr 1966 421 J822

Diapause, Life cycle, Ostrinia nubilalis, Ostrinia nubilalis (Hubner), Photophases.

1974-67
MECHANICS OF INFRARED CINEMATOGRAPHY IN STUDIES WITH THE EUROPEAN CORN BORER.
A N Sparks L A Facto
J Econ Entom 59(2):420-422
Apr 1966 421 J822
Infrared photography, Mechanics, Ostrinia nubilalis, Ostrinia nubilalis (Hubner).

1975-67
A PHOTOELECTRIC COUNTER TO MONITOR OLFACTORY RESPONSE OF MOTHS.
K J Starks P S Callahan W W McMillan H C Cox
J Econ Entom 59(4):1015-1017, PL.
Aug 1966 421 J822
Moths, Olfactometers, Olfactory response, Photoelectric counter.

1976-67
ARTIFICIAL EGGING RECEPTACLES FOR THREE SPECIES OF TEPHRITID FLIES.
N Tanaka
J Econ Entom 58(1):177-178
Feb 1965 421 J822
Ceratitis capitata, Ceratitis capitata, Dacus cucurbitae, Dacus cucurbitae, Dacus dorsalis, Dacus dorsalis (Hendel), Insect eggs.

1977-67
A STORAGE METHOD FOR COLLECTIONS OF INSECTS IN LIQUID.
J B Thomas
Can Entom 94(2):216-218
Feb 1962 421 C16
Insect collecting equipment.

1978-67
A NEW DRAWING AID.
J B Thomas L M Gardiner
Can Entom 94(2):218-220
Feb 1962 421 C16
Drawing, Microscopy.

1979-67
A THERMAL PREFERENCE METHOD OF BIOSSAY OF THE TOXICITY OF INSECTICIDAL FILMS TO HOUSE FLIES.
J Ward E M Gillham C Potter
Bull Entomol R 51(2):379-387
Jul 1960 421 B87
Biological assay, Diptera, Insecticidal films, Musca domestica, Thermal analysis, Toxicology.

1980-67
DENSITY DEPENDENCE IN POPULATION FLUCTUATIONS.
K E F Watt
Can Entom 96(8):1147-1148
Aug 1964 421 C16
Density, Insect population, Insect population density, Insect population statistics.

1981-67
MATHEMATICAL MODELS FOR USE IN INSECT PEST CONTROL.
K E F Watt
Can Entom 93, SUPPL. 19
1961 421 C16
Insect control, Insect ecology, Insect pests, Mathematical analysis.

1982-67
COMMENTS ON FLUCTUATIONS OF ANIMAL POPULATIONS AND MEASURES OF COMMUNITY STABILITY.
K E F Watt
Can Entom 96(11):1434-1442, TABS.
Nov 1964 421 C16
Animal communities, Animal population, Animal population statistics.

1983-67
EFFECT OF BAIT-TRAP COLOR ON ATTRACTANCY TO DROSOPHILA MELANOGASTER.
H E Wave
J Econ Entom 57(2):295-296
Apr 1964 421 J822
Attractants, Drosophila melanogaster, Insect collecting equipment.

1984-67
A PORTABLE ELECTRICALLY OPERATED COLLECTING DEVICE.
G T Weekman H J Ball
J Econ Entom 56(5):708-709,
Oct 1963 421 J822
Insect collecting equipment.

1985-67
EQUIPMENT FOR TRAPPING AND REARING THE AMERICAN COCKROACH,
PERIPLANETA AMERICANA.
J T Whitlan Jr L W Smith Jr
J Econ Entom 57(1):164-165, PL.
Feb 1964 421 J822
Insect collecting equipment, Insect rearing equipment,
Periplaneta americana, Periplaneta americana.

1987-67
A PORTABLE DEVICE FOR MASS-COLLECTING OR SAMPLING FOLIAGE-
INHABITING ARTHROPODS.
L F Wilson
J Econ Entom 55(5):807-808
Oct 1962 421 J822
Arthropoda, Insect collecting equipment.

1988-67
AN IMPROVED ELECTRONIC COUNTING APPARATUS FOR USE IN OLFAC-
TOMETERS.
G W Wood J W McAllan W D Wasson
J Econ Entom 58(6):1166-1167
Dec 1965 421 J822
Olfactometers.

1989-67
MODIFICATION OF A VACUUM CLEANER FOR CAPTURING GERMAN AND
BROWN-BANDED COCKROACHES.
C G Wright
J Econ Entom 59(3):759-760
Jun 1966 421 J822
Blattella germanica, Brown-banded cockroaches,
Insect collecting equipment, Supella supellectilium,
Vacuum cleaners.

1990-67
THE DYE-TRACER METHODS MEASURING AERIAL SPRAY DEPOSITS IN
FOREST INSECT RESEARCH.
J S Yulli J P Secrest
J Econ Entom 59(3):720-723
Jun 1966 421 J822
Aerial spraying, Deposits, Dyes, Forest insects,
Measurement.

1991-67
TESTS FOR SELECTING TRACER DYES FOR AERIAL SPRAYS.
J S Yulli J D Secrest
J Econ Entom 59(3):719-720
Jun 1966 421 J822
Aerial spraying, Dyes.

ABIES
Observations on mortality factors of the fir engraver beetle, Scolytus ventralis (Coleoptera:Scolytidae). 218

ABIES CONCOLOR
Host specialization of dwarf mistletoe on red and white fir in California. 929

ABIES MAGNIFICA
Host specialization of dwarf mistletoe on red and white fir in California. 929

ABNORMALITIES
A genetic abnormality in an Idaho clone of fragaria vesca. 830

ABSORPTION
Absorption and metabolism of C14-labeled DDT by DDT-susceptible and DDT-RESISTANT pink bollworm adults. 314

Effect of light and humidity on the absorption and translocation of dimethoate in the cotton plant. 1165

Effects of temperature, reduced pressure, and moisture content on sorption and retention of ethylene dibromide by wheat and corn. 1398

ABSORPTION (BIOLOGICAL)
Effect of water solubility and soil moisture upon plant uptake of granulated systemic insecticides. 1218

Absorption, excretion, and metabolism of a new antibacterial agent, nalidixic acid. 1643

ABSORPTION COLUMNS
Insect pheromone collection with absorption columns. I. Studies on model organic compounds. 607

ABSTRACTING
Report and abstracts of the 1959 meeting of the northeastern division of the American Phytopathological Society. 717

ACARICIDE RESIDUES
Microcoulometric gas chromatographic analysis of grapes and cottonseed for chlorobenzilate residues. 1433

ACARICIDES
Susceptibility to acaricides of the mite Tetranychus cinnabarinus infesting cotton in Egypt. 372

The effects of acaricides on the developmental stages of the two-spotted spider mite, Tetranychus telarius. 509

Present status in control of the European red mite in Ohio with summer acaricides. 1113

Acaricide residues:A modification of the Rosenthal method for rapid determination of Kelthane residues. 1462

A technique for testing acaricide residues against two-spotted spider mites on field-grown roses. 1480

A comparative study of toxicological test methods on a population of the two-spotted spider mite (Tetranychus telarius). 1588

Acaricidal properties of Aramite and Kelthane against two strains of two-spotted spider mite. 1693

Arcaricide bioassay: Two organisms suitable for bioassaying specific acaricides. 1808

ACER NEGUNDO
Life history, habits, and damage of the boxelder leaf gall midge, Contarinia negundifolia Felt (Diptera: Cecidomyiidae) in Michigan. 680

ACER RUBRUM
Effects of disbudding on the shoot mortality, growth, and bud production in red and sugar maples. 1155

ACER SACCHARUM
Effects of disbudding on the shoot mortality, growth, and bud production in red and sugar maples. 1155

ACETONE
Determination of resistance by dipping lice in acetone solutions. 335

ACHETA DOMESTICUS
Growth inhibition of the house cricket with ethylene. 371

ACIDS
An acid method for the volumetric estimation of water-soluble dithiocarbamates. 1858

ACLERIS VARIANA
The relation of weather to two population declines of the black-headed budworm, Acleris variana (Fernald) (Lepidoptera:Tortricidae), in coastal Alaska. 595

ACROBASIS VACCINII
The response of cranberry fruitworm to black light. 1251

ACRYLON
Fumigant residues: Retention of acrylonitrile and carbon tetrachloride by shelled walnuts fumigated with Acrylon. 1434

ACRYLONITRILE
Fumigant residues: Retention of acrylonitrile and carbon tetrachloride by shelled walnuts fumigated with Acrylon. 1434

ACTINOMYCETES
Superior media for isolation of actinomycetes from soil. 1765

An enrichment method for isolating actinomycetes that produce diffusible antifungal antibiotics. 1798

ACYRTHOSIPHON PISUM
Some effects of temperature on the transmission of pea enation mosaic virus and on the biology of the pea aphid vector. 1009

Effect of the pea aphid on alfalfa in southern Alberta. 1128

Stability of resistance to pea aphid and spotted alfalfa aphid in several alfalfa clones under various temperature regimes. 1142

ADHESIVES
Adhesives for holding mites to glass plates. 1892

ADSORPTION
Absoption and metabolism of Rueiene by arthropods. 305

The sorption and retention of ethylene dibromide by fumigated citrus and avocado fruits. 1237

Dosage applied and concentration obtained in the funigation of various commodities with methyl bromide. 1390

ADULTS
Resistance to ronnel in a strain of horn flies. 428

Mortality and fertility response of Musca domestica adults to certain known mutagenic or anti-tumor agents. 477

Metabolism of labeled glutamic acid in adult German cockroaches. 511

New insecticides against adults of two species of Hippelates eye gnats. 540

Toxicity of some pesticides to eggs, larvae, and adults of the green lacewing, Chrysopa carnea. 1549

Evaluation of insecticides in the laboratory against adult and larval stable flies. 1655

AEDES AEGYPTI
The effects of various chemicals on eggs of the yellow-fever mosquito, Aedes aegypti. 1631

AERATION
Influence of aeration during gamma irradiation of screw-worm pupae. 289

AERIAL DUSTING
Comparison of aerial spray and dust insecticide applications for the control of cotton insects in Arizona. 671

AERIAL SPRAYING

AERIAL SPRAYING
Control of the midge Giyptotendipes parides with iow-voiume aeriai sprays of maiathion. 559

Comparison of aeriai spray and dust insecticide appiications for the control of cotton insects in Arizona. 671

Insecticide deposits from dusts or sprays applied by aircraft to fiue-cured tobacco. 1177

Spread factor variation for oil-base, aeriai sprays. 1845

A rapid method of estimating the atomization of oil-base aerial sprays. 1942

Precision of atomization estimates for aerial sprays. 1951

The dye-tracer methods measuring aeriai spray deposits in forest insect research. 1990

Tests for selecting tracer dyes for aerial sprays. 1991

AFLATOXIN
Mycotoxins II. The biological assay of aflatoxin in Peking white ducklings. 1543

AFRICA
Further studies on techniques for sampling the density of African house fiy populations. 1. A field comparison of th use of the Scudder griii and the sticky-flytrap method for sampling the indoor density of African house flies. 185

AGAR
The use of agar media in transporting and rearing phytoseiid mites. 520

Frozen-iima-bean agar for cuiture and storage of Phytophthora sojae. 762

Sterilization of agar media with propylene oxide. 1840

AGE
Observations on the role of light, temperature, age, and sex in the response of screw-worm flies to attractants. 347

AGKISTRODON HALYS BLOMHOFFIL
The relationship between the hemorrhagic and iethal activities of japanese mamushi (Agkistrodon halys biomhoffil) venom. 1660

AGRICULTURAL CHEMISTRY
Application of direct photometry to agricuitural anaiysis. 1967

AGRICULTURAL ECONOMICS
Farmers expenditures for pesticides in 1964. 718

AGRICULTURAL FINANCE
Report and abstracts of the 1959 meeting of the northeastern division of the American Phytopathological Society. 717

AGRICULTURAL PRODUCTS
Herbicide determination:A new basic procedure for determining phenoxy acid herbicides in agricuitural products. 1496

AGRICULTURAL REGULATION
The impact on the anaiytical chemist of government regulations pertaining to tissue residues. 1483

AGRICULTURE
Recent developments in public health entomology and their possible application to agriculture. 715

Report and abstracts of the 1959 meeting of the northeastern division of the American Phytopathological Society. 717

AGROSTIS
Use of herbicides to break the life cycle of the bentgrass nematode, Anguina agrostis (Steinbuck 1799) Filipjev 1936. 1278

AGROSTIS PALUSTRIS
Broad spectrum fungicides tested for control of melting-out of Kentucky biuegrass and Scierotinia doiiar spot of Seaside bentgrass. 779

AGROTIS ORTHOGONIA
Chemical control of the pale western cutworm infesting wheat in Alberta, Canada. 450

Diapause in eggs of the pale western cutworm Agrotis orthogonia Morr. (Lepidoptera: Noctuidae). 451

Quantitive reiationship between consumption and excretion of dry matter by larvae of the pale western cutworm, Agrotis orthogonia Morr. (Lepidoptera: Noctuidae). 458

AIR
Field selection of different log odors by scoiytid beeties. 1083

Determination of phosphine in air by gas chromatography. 1408

The concentration of dimefox in air resulting from its use on hops. 1415

AIR POLLUTION
The concentration of dimefox in air resulting from its use on hops. 1415

AIR TEMPERATURE
The effect of air and ground surface temperature on boli weevil winter survival. 615

AIR-CURED TOBACCO
Effect of insecticides on the green peach aphid, Myzus persicae (Sulzer), infesting burley tobacco. 1249

AIRCRAFT DISINFESTATION
Helicopter application of guthion for the control of the douglas-fir cone midge. 1150

Low-volume concentrate sprays applied by aircraft for control of the cereal leaf beetle. 1267

Further airplane spray tests with carbaryl against gypsy moth in New York. 1577

Micronized insecticidal dusts for aircraft disinsectization. 1699

Portable sprayer for aerial LVC applications. 1900

ALABAMA
The looper complex in Alabama (Lepidoptera plusiinae). 24

Spring applications of insecticides for control of alfalfa weevil in Alabama. 1068

Influence of thrips on cotton yields in Alabama. 1260

ALABAMA ARGILLACEA
First findings of cotton leafworm larvae in the United States, 1922 to 1963. 171

The effects of various larval and adult diets on the fecundity and longevity of the bollworm, tobacco budworm, and cotton leafworm. 503

Additional noncotton hosts of the boll weevil and cotton leafworm. 1171

Field experiments with insecticides on cotton for control of the boll weevil, bollworm, and cotton leafworm in 1961. 1585

ALASKA
The relation of weather to two population declines of the black-headed budworm, Acleris variana (Fernald) (Lepidoptera:Tortricidae), in coastal Alaska. 595

White spruce seed loss caused by insects in interior Alaska. 1264

ALBERTA
Adult Elateridae of southern Alberta, Saskatchewan and Manitoba (Coleoptera). 14

Ecology of species of Bombus Latr. (Hymenoptera: apidae) in southern Alberta. I. Subgenus Alpinobombus Skor. 92

Sugar-beet root aphid, Pemphigus betae Doane (Homoptera: Aphididae), in southern Alberta. 419

Chemical control of the pale western cutworm infesting wheat in Alberta, Canada. 450

Effect of the pea aphid on alfalfa in southern Alberta. 1128

Evaluation of three alternative insecticides for control of grasshoppers in Alberta. 1619

ALCOHOLS
The development of stem rust on wheat leaves treated with some sugars and sugar alcohols. 990

Fungicide evalvation: Fungicidal activity of some new amino alcohols synthesized from citrus ($)-limonene. 1856

ALFALFA
Occurrence of asiatic oak weevil in alfalfa and red clover in maryland. 101

Experiments on control of the alfalfa seed chalcid, Bruchophagus roddi, in seed alfalfa. 273

Non-preference as a mechanism of sweetclover and alfalfa resistance to the sweetclover aphid and the spotted alfalfa aphid. 476

Native insects as pollinators of caged alfalfa clones and seedling performance of the progeny. 487

Factors affecting resistance of alfalfa clones to adult feeding and oviposition of the alfalfa weevil in the laboratory. 661

Alfalfa mosaic virus in soybean. 726

The effects of temperature and moisture on development of black stem of alfalfa. 738

Host range, pathogenicity, and taxonomy of Ascochyta imperfecta. 796

Rapid screening of alfalfa for resistance to Corynebacterium insidiosum by inoculating petioles. 819

Specific infectivity changes with alfalfa mosaic virus. 862

Spring applications of insecticides for control of alfalfa weevil in Alabama. 1068

Evaluating the control of the clover root curculio larva on alfalfa. 1114

Field tests for the control of certain alfalfa insect pests in New York. 1115

Effect of the pea aphid on alfalfa in southern Alberta. 1128

Stability of resistance to pea aphid and spotted alfalfa aphid in several alfalfa clones under various temperature regimes. 1142

Population counts vs. nymphs per gram of plant material in determining degree of alfalfa resistance on the potato leafhopper. 1145

Factors affecting resistance of selected alfalfa clones to the potato leafhopper. 1194

Leafhoppers attacking alfalfa in the Salt River Valley of Arizona. 1195

Screening alfalfas for resistance to some common insect pests in Arizona. 1196

Germination of alfafa seed treated with dry and liquid formulations of di-syston and phorate. 1222

Experiment on alfalfa insect control in Maryland. 1245

Culturing, histopathology, and biochemistry of Ditylenchus dipsaci and Aphelenchoides ritzema-bosi on alfalfa tissues. 1300

Reaction of sixteen varieties of alfalfa to two species of root-knot nematodes. 1309

Mechanisms of contamination of alfalfa with heptachlor and heptachlor epoxide. 1442

Rates of disappearance of zolone and imidan from alfalfa. 1518

The disappearance of residues of bidrin from alfalfa. 1520

Enzyme inhibition: The trypsin inhibitor of alfalfa. 1787

ALFALFA SEED CHALCID
Experiments on control of the alfalfa seed chalcid, Bruchophagus roddi, in seed alfalfa. 273

Toxicity of several insecticides to the adult alfalfa seed chalcid in laboratory tests. 1545

ALGICIDES
Toxicologic studies on Armazide. 1541

ALIPHATIC ESTERASES
Inhibition of cholinesterase and ali-esterase in parathion and paraoxon poisoning in the house fly. 1552

ALKYL 2,4,5-TRICHLOROPHENYL N-ALKYLPHOSPHORAMIDATES
Structure and insecticidal activity of alkyl 2,4,5-trichloro-phenyl n-alkylphosphoramidates. 1830

ALKYLATION
The induction of sexual sterility in the screw-worm fly by antimetabolites and alkylating agents. 346

Comparative fungitoxicity of some mono- and dialkyl-substituted dithiocarbamate vapors and solutions. 1751

ALLELES
Genetics of the allelic series at the MI)A locus in barley and cultures of Erysiphe graminis f. sp. hordei that differentiate these alleles. 900

ALMONDS
The role of fumaric acid, a fungal toxin, involved in the hull rot disease of almond. 894

A quantitative method for determining fumaric acid, a toxin involved in the hull rot disease of almond. 895

ALPHA-CHLORO-NN-DIALLYL-ACETAMIDE
Metabolism of alpha-chloro-N,N-diallylacetamide(CDAA) and 2-chloroallyl-N,N-diethyldithlocarbamate(CDEC) by plants. 1750

ALSOPHILA POMETARIA
Bacillus thuringiensis against the fall cankerworm, Alsophila pometaria. 1210

Effect of delayed spraying on cankerworm control. 1316

ALTERNARIA
Comparison of cultural variants of Alternaria sesame. 743

ALTERNARIA BRASSICAE
Studies of Alternaria spp. pathogenic on Cruciferae. 768

ALTERNARIA BRASSICOLA
Studies of Alternaria spp. pathogenic on Cruciferae. 768

ALTERNARIA RAPHANI
Studies of Alternaria spp. pathogenic on Cruciferae. 768

ALTERNARIA SOLANI
Conidial production from filter paper cultures of Helminthosporium vagans and Alternaria solani. 875

ALTHEA
Feeding and oviposition reaction of boll weevils to cotton, althea, and okra flower buds. 376

AMBROSIA
The pseudo-curly top disease in south Florida. 992

AMIBEN
Determination of amiben in tomatoes by electron affinity gas chromatography. 1427

AMINES
Gossypol extractants: Oral toxicity to poultry of a commercial octylamine. 1571

AMINO ACIDS

AMINO ACIDS
Amino acid requirements for the wheat stem sawfly determined with glucose-U-C14 after vacuum-infiltration. 457

Nutritional studies on the genus Hirsutella: Iii. Acid-hydrolyzed casein and amino acid combinations as sources of nitrogen. 507

Amino acid content of corn silks in relation to resistance to corn earworm. 1186

Effect of copper and glyodin fungicides on amino acid and sugar content and oxygen use of Colletotrichum capsici. 1793

AMINO COMPOUNDS
DDT susceptibility of Drosophila melanogaster in relation to dietary amino nitrogen. 588

AMINO-NITRO-O-TOLUAMIDE
The isolation and identification of the amino-nitro-o-toluamide formed by the biological reduction of 3,5-dintro-o-toluamide. 1860

AMINOTRANSFERASES
Transamination in aedes aegypti. 541

AMITON
The relation between basicity and selectivity in organo-phosophates. 1854

AMITROLE
Phytotoxicity of herbicides: Reduction of 3-amino-1,2,4-triazole phytotoxicity in tomato plants. 1701

Herbicide metabolism:Absorption and metabolism of amino-triazole in cotton. 1772

AMMONIA
Biuret formation in the manufacture of urea. 1837

AMMONIUM
Evaluation of ammonia-generating formulations for control of citrus fruit decay. 795

AMPHIMALLON MAJALIS
Butyl sorbate as an attractant for European chafer. 646

ANAPLASMOSIS
The effect of horse fly control on rate of infection of bovine anaplasmosis under field conditions in Louisiana. 1365

ANASTREPHA LUDENS
Laboratory techniques for evaluating hempa and other chemosterilants against the Mexican fruit fly. 518

Within-package ethylene dibromide fumigation of mangoes and grapefruit in fiberboard cartons to destroy Mexican fruit fly infestations. 1392

Use of field bait stations in chemosterilant control of the Mexican fruit fly. 1965

ANGUINA AGROSTIS
Use of herbicides to break the life cycle of the bentgrass nematode, Anguina agrostis (Steinbuck 1799) Filipjev 1936. 1278

ANGULAR LEAFSPOT (MAGNOLIA)
An angular leaf spot of Magnolia grandiflora caused by Isariopsis sp. 825

ANGULAR LEAFSPOT (STRAWBERRIES)
Angular leafspot, a new disease of strawberry. 853

ANILIDES
Herbicidal activity: Molecular size vs. herbicidal activity of anilides. 1625

ANIMAL COMMUNITIES
Comments on fluctuations of animal populations and measures of community stability. 1982

ANIMAL METABOLISM
The metabolism of s-propyl-1-C14 n-butylethylthiocarbamate (Tillam-C14) in rats. 1826

The metabolism of dimethoate by vertebrate tissues. 1867

ANIMAL MORPHOLOGY
Growth, reproduction, mortality, and pathologic changes in rats fed gamma irradiated potatoes. 1562

ANIMAL MORTALITY
Growth, reproduction, mortality, and pathologic changes in rats fed gamma irradiated potatoes. 1562

ANIMAL NUTRITION
Insecticide effects on animals:Response of experimental animals to Phosdrin insecticide in their daily diets. 1573

ANIMAL PHYSIOLOGY
Growth, reproduction, mortality, and pathologic changes in rats fed gamma irradiated potatoes. 1562

ANIMAL POPULATION
Comments on fluctuations of animal populations and measures of community stability. 1982

ANIMAL POPULATION STATISTICS
Comments on fluctuations of animal populations and measures of community stability. 1982

ANIMAL PROTECTIVE DEVICES
Induced buildup of populations of Bovicola bovis on cattle in Oregon. 1352

ANIMALS
Experiments with homogenates of larvae of Trombicula splendens. 1333

Studies on the removal of embedded lone star ticks Amblyomma americanum. 1349

Toxicology of pyridinethiones. 1713

ANOCENTOR NITENS
Insecticide tests against the tropical horse tick, Dermacentor nitens, on horses. 1340

ANOPLURA
Lindane and BHC in egg yolks following recommended uses for louse and mite control. 1364

ANOT
Feed additive residues:Determination of 3-amino-5-nitro-o-toluamide (ANOT) in chicken tissues. 1530

ANTHONOMUS EUGENII
Insecticide experiments to control green peach aphid and pepper weevil on peppers. 373

ANTHONOMUS GRANDIS
Recent research on the boll weevil in northern Sonora, Mexico, and the thurberia weevil in arizona. 11

A nematode parasite of the boll weevil. 33

Observations of puncturing and oviposition behavior of boll weevils. 54

Adult boll weevils and eggs marked with dye fed in larval diet. 66

Effects of the fall environment of the boll weevil in northeast Mississippi. 85

A field study of diapause, diapause control, and population dynamics of the boll weevil. 129

A native host plant of the boll weevil and other cotton insects. 131

Studies on the ability of overwintered boll weevils to find fruiting cotton plants. 172

Spread of boll weevil and its control in far west Texas. 197

The relationship of the fruiting of the cotton plant and overwintered boll weevils to the F1 generation. 236

Characters for determination of sex of the boll weevil. 264

The biology of the boll weevil in relation to cotton type. 297

The status of boll weevil resistance to chlorinated hydrocarbon insecticides in Texas. 308

Feeding and oviposition reaction of boll weevils to cotton, althea, and okra flower buds. 376

The utility of sealed punctures for studying fecundity and egg laying by the boll weevil. 377

A spray technique for implanting boll weevil eggs on artificial diets. 389

Status of boll weevil resistance to insecticides in Louisiana during 1961. 405

Hempa and apholate as chemosterilants for the boll weevil. 430

Antifertility effect of the chemosterilant apholate on the male boll weevil. 433

Spectral response characteristics of the boll weevil. 442

Cotton extracts as arrestants and feeding stimulants for the boll weevil. 460

Extraction of a boll weevil attractant from the surrounding growing cotton. 462

A field-cage study of population dynamics of the boll weevil. 496

The reproduction-diapause approach to population control of the boll weevil. 497

The mating behavior of the boll weevil, Anthonomus grandis. 516

Surface sterilization of eggs of the boll weevil with cupric sulfate. 549

Field insecticide tests against several cotton pests. 563

The effect of air and ground surface temperature on boll weevil winter survival. 615

A cottonseed-meal diet for laboratory cultures of the boll weevil. 633

A marking and recovery method for use in boll weevil movement studies. 641

Starvation method for obtaining diapausing boll weevils able to survive the winter in hibernation. 657

Emergence pattern of first-generation boll weevils in an isolated plot during 1960 and 1961. 665

Exploratory studies on gamma radiation for the sterilization of the boll weevil. 697

Egg deposition by boll weevils isolated from males during hibernation period and after spring emergence. 708

Selection in cotton for antibiosis to the boll weevil, Anthonomus grandis. 1102

Field experiments for control of the boll weevil, bollworm spp., and the cotton aphid on cotton in 1960-62. 1137

The effect of boll weevil infestations on yield and quality of cotton. 1166

Additional noncotton hosts of the boll weevil and cotton leafworm. 1171

Carbamate-induced systemic repellency to the boll weevil on cotton. 1178

An arrestant and feeding stimulant for the boll weevil in water extracts of cotton-plant parts. 1180

A boll weevil repellent from the volatile substance of cotton. 1182

Influence of the glandless genes on feeding, oviposition, and development of the boll weevil in the laboratory. 1183

Studies of resistance of cotton strains to the boll weevil. 1189

Effects of the boll weevil and bollworm on cotton quality. 1255

Comparison of insecticide application schedules for control of cotton insects. 1261

Field experiments with insecticides on cotton for control of the boll weevil, bollworm, and cotton leafworm in 1961. 1585

The Youden Square as an experimental design for the field evaluation of boll weevil insecticides. 1607

Tests for boll weevil control with a systemic insecticide and a boll weevil feeding stimulant. 1680

A laboratory technique for bioassay of plant attractants for the boll weevil. 1916

ANTHONOMUS GRANDIS THURBERIAE
Recent research on the boll weevil in northern Sonora, Mexico, and the thurberia weevil in arizona. 11

ANTHRACNOSE (PLATANUS)
The early leaf and twig blight stage of sycamore anthracnose. 915

ANTHRACNOSE FUNGI
Pectinolytic and cellulolytic (Cx) enzyme production by cucurbit anthracnose fungi. 1804

ANTI-TUMOR AGENTS
Mortality and fertility response of Musca domestica adults to certain known mutagenic or anti-tumor agents. 477

ANTIBIOSIS
Selection in cotton for antibiosis to the boll weevil, Anthonomus grandis. 1102

ANTIBIOTICS
Causal agents of bacterial diseases of the silkworm and the use of antibiotics in their control. 263

Effects of some antibiotics and other compounds on fertility and mortality of orchard mites. 421

Chemotherapy of cereal rusts with a new antibiotic. 783

The selective effect of the antibiotic Pimaricine upon growth of several cacao fungi in vitro. 828

Studies on control of black rot of Crucifers with antibiotics. 859

The partial purification and biological activity of an antifungal antibiotic produced by a strain of Streptomyces griseus. 1018

Activity of the antibiotic produced by Pullularia pullulans. 1722

An enrichment method for isolating actinomycetes that produce diffusible antifungal antibiotics. 1798

ANTIGENS
The antigenic characteristics and the relationship among strains of alfalfa mosaic virus. 731

Serological and biological properties of brome mosaic virus antigens. 827

The antigenic analysis of extracts from healthy plants. 1777

ANTIMETABOLITES
The induction of sexual sterility in the screw-worm fly by antimetabolites and alkylating agents. 346

ANTIRRHINUM
Cercospora blight of snapdragon. 843

ANTISPORULATION
Antisporulant action of hexachloro-2-propanol. 1749

AONIDIELLA AURANTII

AONIDIELLA AURANTII
Effect of repeated sprays on susceptibility of California red scale to parathion. 342

Studies of dimethoate for control of California red scale. 343

Hydrogenation refining vs. efficiencies of spray oils against citrus red mite eggs and California red scale. 587

Improved laboratory techniques for rearing California red scale on lemons. 645

APACHE CICADA
Protection of dates from injury caused by the Apache cicada in California. 1106

APHANOMYCES EUTEICHES
Histological studies on penetration of pea roots by zoospores of Aphanomyces euteiches. 780

Germination of oospores of Aphanomyces euteiches embedded in plant debris. 970

Sulphur nutrition of Aphanomyces euteiches. 1743

Oospore formation by Aphanomyces euteiches on synthetic media. 1784

APHELENCHOIDES RITZEMA-BOSI
Culturing, histopathology, and biochemistry of Ditylenchus dipsaci and Aphelenchoides ritzema-bosi on alfalfa tissues. 1300

APHIDAE
Aphid trap collections over a three-year period from four southern Florida locations. 253

APHIDIDAE
Differential transmission of four strains of strawberry vein banding virus by four aphid vectors. 805

Tests with systemic insecticides for control of insects and certain diseases on potatoes. 1125

Improved method of using yellow-pan aphid traps. 1905

An aphid flight chamber: Construction and operation. 1936

An expandable cage for feeding tests of coccinellid predators of aphids. 1954

APHIDINE BRACONID
Initial field observations in California on Trioxys pallidus (Haliday), a recently introduced parasite of the walnut aphid. 1057

APHIS GOSSYPII
Field experiments for control of the boll weevil, bollworm spp., and the cotton aphid on cotton in 1960-62. 1137

APHOLATE
Quantitative effects of tepa, metepa, and apholate on sterilization of male house flies. 328

A field experiment with apholate as a chemosterilant for the control of house flies. 399

Effects of apholate on restricted populations of insecticide -resistant house flies, Musca domestica. 416

Hempa and apholate as chemosterilants for the boll weevil. 430

Antifertility effect of the chemosterilant apholate on the male boll weevil. 433

Egg viability and longevity of japanese beetles treated with tepa, apholate, and metepa. 485

The effect of apholate on the ovarian development of house flies. 534

Sterilization of the cabbage maggot with apholate. 640

Susceptibility of mature and newly emerged face flies to chemosterilization with apholate. 700

Effects of apholate on a restricted population of house flies. 1608

Insect sterilant experiments in outdoor cages with apholate, metepa, and four bifunctional aziridine chemicals against the house fly. 1675

Evaluation of apholate and tepa as chemosterilants for the fall armyworm. 1715

APICAL SEEDINESS
The reduction of insect-caused apical seediness in strawberries. 1226

APIS MELLIFERA
DDT resistance in honey bees. 271

The effects of position on hatching of honey bee eggs in the laboratory. 356

Transmission of sacbrood disease to individual honey bee larvae. 439

Studies on rearing honey bee larvae in the laboratory. I. The effect of royal jelly taken from different ages of queen cells on queen differentiation. 527

Evaluation of chemicals as honey bee attractants and repellents. 687

APOIDEA
Some bees (Apoidea) associated with peanut flowering. 76

APOTHECIUM
The apothecial stage of botrytis squamosa, cause of tip and leaf blight of onions. 887

APPLE TREES
Foliage-feeding Lepidoptera on young nonbearing apple trees in Wisconsin. 1161

APPLES
Pupation sites of the eye-spotted bud moth, Spilonota ocellana and differences in degree of development on two apple varieties in Wisconsin. 124

Spiders on apple in Wisconsin and their abundance in a natural and two artificial enviroments. 125

An ecological study of arthropod populations on apple in northeastern Wisconsin: species affecting the fruit. 165

A biochemical response of apple tissues to fungus infection. 733

Susceptibility of various apple varieties to the oak wilt fungus. 735

Leaf enations in apple inoculated from cherry. 869

The occurrence of a variety of enzymes hydrolyzing cell wall polysaccharides in apples rotted by Botryosphaeria ribis. 883

Spy 227, a sensitive indicator for apple viruses. 893

The influence of a virus disease and parasites on Spilonota ocellana in apple orchards. 1144

Natural biotic control factors of the eye-spotted bud moth, Spilonota ocellana on apple in Wisconsin. 1162

Atractotomus mali and Campylomma verbasci (Heteroptera: miridae) on apples in Conn. 1163

The influence of spray programs on the fauna of apple orchards in Nova Scotia. XI. effects of low dosages of DDT on predator populations. 1168

The relation of thrips to pansy spot on apples. 1174

Comparison of soil surface treatments of some fumigants and soil insecticides for apple maggot control. 1179

Progress on insecticidal control of apple insects. 1199

Fumigation of apples to control the apple maggot, Rhagoletis pomonella. 1224

Bulk fumigation of apples with ethylene dibromide under plastic tarpaulins for apple maggot. 1225

Growth of apple seedlings in relation to soil temperature and inoculation with Pratylenchus penetrans. 1303

Biochemical changes associated with the development of low-temperature breakdown in apples. 1373

Chemical control of periodical cicada, Magicicada septendecim, on apples in North Carolina. 1401

Rapid determination of diphenylamine in apples by direct bromination and gas chromatography. 1469

Colorimetric determination of 6-methyl-2,3-quinoxalinedithiol cyclic carbonate (Morestan) residues in apples and pears. 1476

APPROACH
Quantitation of effect of several stimuli on the approach of Aedes aegypti. 116

APRICOTS
A virus-caused stunt of apricot and its relationship to certain other stonefruit virus diseases. 1032

AQUATIC INSECTS
Effects of water levels on the overwintering survival and emergence of the larch sawfly in a bog habitat. 104

A list of trichoptera taken at Montreal and Chambly, Quebec, with descriptions of three new species. 159

A quantitative method for assessing the nuisance caused by non-biting aquatic insects. 711

ARAMITE
2-(p-tert-butylphenoxy)isopropyl 2-chloroethyl sulfite (Aramite) I.Acute, subacute, and chronic oral toxicity. 1661

Acaricidal properties of Aramite and Kelthane against two strains of two-spotted spider mite. 1693

ARCEUTHOBIUM CAMPYLOPODUM
Host specialization of dwarf mistletoe on red and white fir in California. 929

ARCHIPS ARGYROSPILUS
A sampling technique for population and mortality factors of the fruit-tree leaf roller, Archips argyrospilus (Wlk.) (Lepidoptera: Tortricidae), on apples in Quebec. 170

ARCTIC
A new artic aphid (Homoptera: Aphididae). 189

The scale insects of the Canadian Artic (Homoptera: Coccoidea). 192

AREA SAMPLING
A quick trap for area sampling of arthropods in grassland communities. 655

ARGENTINA
Study of psorosis in Concordia, Argentina. 940

Incidence of bud-union crease in citrus trees grafted on trifoliate rootstock in the Delta del Parana and San Pedro areas of Argentina. I023

ARGIDAE
A method for candling pine sawfly cocoons. 678

The sawfly Atomacera decepta, a pest of Hibiscus. 1250

ARGYROTAENIA VELUTINANA
Trichogramma minutum as a parasite of the codling moth and red-banded leaf roller. 363

A pre-diapause arrested development period in the red-banded leaf roller, Argyrotaenia velutinana. 398

An improved medium for rearing red-banded leaf roller. 580

Progress on insecticidal control of apple insects. II99

Toxicity of insecticide residues on grape foliage to red-banded leaf roller. I581

ARIZONA
Recent research on the boll weevil in northern Sonora, Mexico, and the thurberia weevil in arizona. 11

Seasonal flights of insect vectors of several plant viruses in southern Arizona. 38

A study of the khapra beetle, Trogoderma granarium, in commercial grain storages in southern Arizona. 161

Notes on and control of stink bugs affecting cotton in arizona. 670

Peach shot hole in Arizona. 849

Leafhoppers attacking alfalfa in the Salt River Valley of Arizona. 1195

Screening alfalfas for resistance to some common insect pests in Arizona. 1196

Comparative susceptibility of long- and short-staple cotton varieties to bollworm injury in Arizona. 1263

ARMAZIDE
Toxicologic studies on Armazide. 1541

ARMEEN 8D
Gossypol extractants: Oral toxicity to poultry of a commercial octylamine. 1571

ARSANILIC ACID
A carcinogenicity evaluation of potassium arsenite and arsanilic acid. 1436

Metabolic stability of radioactive arsanilic acid in chickens. 1510

Metabolism of arsanilic acid. I. Metabolic stability of doubly labeled arsanilic acid in chickens. 1663

Metabolism of arsanilic acid. II. Localization and type of arsenic excreted and retained by chickens. 1664

ARSENIC
The reproductive capacity of female Boophilus annulatus collected from cattle dipped in arsenic or coumaphos. 403

Herbicide residues: Determinations of small amounts of arsenic in potatoes. Extraction and reduction of molybdoarsenic acid. 1493

Metabolism of two forms of dietary arsenic by the rat. 1503

ARTEMIA SALINA (L)
Biological assay of insecticides using the brine shrimp, Artemia salina (L). 1528

ARTEMIA SALINA LEACH
Arcaricide bioassay: Two organisms suitable for bioassaying specific acaricides. 1808

ARTHROPODA
An ecological study of arthropod populations on apple in northeastern Wisconsin: species affecting the fruit. I65

Effects of DDT, as used in black fly larval control, on stream arthropods. 1626

A light-weight leaf cage for small arthropods. 1931

ARTICHOKES
The cribrate weevil, a new pest of the globe artichoke in California. 863

ARTIFICIAL DIET
A technique for rearing the gypsy moth, Porthetria dispar (L.), on an artificial diet. 554

ARTIFICIAL DIETS
A spray technique for implanting boll weevil eggs on artificial diets. 389

Evaluation of five artificial diets for the laboratory rearing of alfalfa weevil larvae. 545

ARTIFICIAL INFESTATION

ARTIFICIAL INFESTATION
Methods of artificially infesting corn with the corn earworm and factors influencing resistance. 1151

ASCLEPIAS
Recovery of X-disease virus from naturally infected milkweeds. 814

ASCOCHYTA IMPERFECTA
Host range, pathogenicity, and taxonomy of Ascochyta imperfecta. 796

ASCORBIC ACID
Changes in the oxidation rates of polyphenols and ascorbic acid in tobacco stem tissues invaded by Pseudomonas solanacearum. 878

ASCOSPORES
Bacteria in the perithecia of Hypoxylon pruinatum and their effect on ascospore germination and colony development. 1048

ASEXUAL REPRODUCTION
Asexual variants of Melampsora lini. 801

ASPERGILLUS NIGER
Stem rot of Dracaena sanderiana. 911

The effect of mineral nutrition on spore germination and growth responses in Aspergillus niger and some other fungi. 1771

ASPIRATOR
A modified aspirator for collecting small arthropods. 1945

ASSAY
An assay for the detection of nematode repellents. 1285

ASTER YELLOWS (CALLISTEPHUS CHINENSIS)
Further cytological and cytochemical studies on the insect vector of aster yellows virus. 866

ASTER YELLOWS (CARROTS)
Further cytological and cytochemical studies on the insect vector of aster yellows virus. 866

Aster yellows control in head lettuce and carrots in Prince Edward Island. 1248

ATLAS 46
Genes conditioning pathogenicity in Erysiphe graminis f. sp. hordei on barley variety Atlas 46. 902

ATTRACTANTS
The olfactory response of Ips confusus (LeConte) (Coleoptera: Scolytidae) to the secondary attraction in the laboratory. 255

Insect attractants:New attractants for the Mediterranean fruit fly. 295

Tert-butyl and tert-pentyl esters of 6-methyl-3-cyclohexene-1-carboxylic acid as attractants for the Mediterranean fruit fly. 296

Field studies on attack flight and log selection by the ambrosia beetle Trypodendron lineatum (Oliv.) (Coleoptera: Scolytidae). 331

Observations on the role of light, temperature, age, and sex in the response of screw-worm flies to attractants. 347

Studies of sex attractant of banded cucumber beetle. 349

Collection of additional sex attractant from the virgin female introduced pine sawfly. 456

Extraction of a boll weevil attractant from the surrounding growing cotton. 462

Attractiveness of insecticide baits to adults of Drosophila melanogaster. 514

Volatility and attractiveness to the Mediterranean fruit fly of trimedlure and its isomers, and a comparison of its volatility with that of seven other insect attractants. 519

Ultraviolet radiation as an attractant for adult horn flies. 526

Attractants for japanese beetles tested in the field. 598

Sex pheromones of noctuid moths. I. A quantitative bioassay for the sex pheromone of trichoplusia ni (Lepidoptera: noctuidae). 605

Response of the eastern subterranean termite to an attractive extract from Lenzites trabea-invaded wood. 618

Butyl sorbate as an attractant for European chafer. 646

Evaluation of chemicals as honey bee attractants and repellents. 687

Response of the nantucket pine tip moth to attractants. 689

Primary odors and insect attraction. 690

Some quantitative aspects of insect attraction. 691

Family differences in attractiveness of poultry to the chicken body louse, Menacanthus stramineus (Mallophaga). 1354

Test of attractants for the palm weevil. 1605

An olfactometer for use in the study of mosquito attractants. 1912

A dispensing pump for viscous formulations of lure. 1923

Tests with attractants and a simple trap for the European earwig, Forficula auricularia. 1939

Effect of bait-trap color on attractancy to Drosophila melanogaster. 1983

AUSTRALIA
The behavior of the adult of Aphodius tasmaniae Hope (Col., Scarabaeidae) in south Australia. 508

AUTOGENOUS STRAIN
Olfactory and oviposition responses of the house fly to domestic manures, with notes on an autogenous strain. 486

AUTOXIDATION
Rumen degradation of fungicides:Fate of tetramethylthiuram disulfide in the digestive tract of the ruminant animal. 1789

AVOCADOS
The sorption and retention of ethylene dibromide by fumigated citrus and avocado fruits. 1237

Tolerance of avocados to ethylene chlorobromide and ethylene dibromide dipping and fumigation. 1273

AZINPHOSMETHYL
Resistance to DDT in the adult codling moth and reference curves for guthion and carbaryl. 282

Activation of guthion by tissue preparations from the American cockroach. 544

Control of the alfalfa weevil, Hypera postica, in N.Y. 1064

Helicopter application of guthion for the control of the douglas-fir cone midge. 1150

Disappearance of guthion from forage crops in Massachusetts. 1519

Effectiveness of insecticides against the sorghum webworm in sorghum heads. 1613

Tests of guthion for the control of the Douglas-fir cone midge. 1629

BACILLUS ANTHRACIS COHN
Bacteriophage for Bacillus thuringiensis Berliner and Bacillus anthracis Cohn. 695

BACILLUS CEREUS FRANKLAND AND FRANKLAND
Reduction of adult house-fly emergence by the effects of Bacillus spp. on the development of immature forms. 310

BACILLUS ENTOMOCIDUS VAR. ENTOMOCIDUS HEIMPEL AND ANGUS
The influence of stickers on the effectiveness of sprays of Bacillus thuringiensis var. thuringiensis Berliner and Bacillus entomocidus var. entomocidus Heimpel and Angus. B44

BACILLUS ENTOMOCIDUS VAR. ENTOMOCIDUS HEIMPEL AND ANGUS
A serological comparison of the parasporal bodies of three insect pathogens. 4B2

BACILLUS THURINGIENSIS VAR. THURINGIENSIS BERLINER
Control of house flies in bovine feces by a feed additive containing Bacillus thuringiensis var. thuringiensis Berliner. 1342

BACILLUS THURINGIENSIS VAR. SOTTO AOKI AND CHIGASAKI

A serological comparison of the parasporal bodies of three insect pathogens. 4B2

BACILLUS THURINGIENSIS VAR. THURINGIENSIS BERLINER
The susceptibility of Bracon-paralyzed Corcyra cephalonica (Stainton) to Bacillus thuringiensis var. thuringiensis Berliner. 642

BACILLUS THURINGIENSIS BERLINER
Field tests with Bacillus thuringiensis Berliner for control of four Lepidopterous pests. 11B7

Bioassay of a microbial insecticide containing spores of Bacillus thuringiensis Berliner. 1B49

BACILLUS THURINGIENSIS
Bioassay of Bacillus thuringiensis-based microbial insecticides. III. Continuous propagation of the salt-marsh caterpillar, Estigmene acrea. 367

Bacillus thuringiensis against the fall cankerworm, Alsophila pometaria. 1210

BACILLUS THURINGIENSIS BERLINER
Bacteriophage for Bacillus thuringiensis Berliner and Bacillus anthracis Cohn. 695

BACILLUS THURINGIENSIS BERLINER
Comparison of Bacillus thuringiensis Berliner var. thuringiensis and chemical insecticides for control of the alfalfa caterpillar. 1293

BACILLUS THURINGIENSIS VAR. THURINGIENSIS BERLINER
Reduction of adult house-fly emergence by the effects of Bacillus spp. on the development of immature forms. 310

The influence of stickers on the effectiveness of sprays of Bacillus thuringiensis var. thuringiensis Berliner and Bacillus entomocidus var. entomocidus Heimpel and Angus. B44

BACILLUS THURINGIENSIS VAR. THURINGIENSIS BERLINGER
Further field experiments on the use of Bacillus thuringiensis and chemical insecticides for the control of the european corn borer, Ostrinia nubilalis, on sweet corn in southwestern quebec. 1139

BACKRUBBERS
Resistance to ronnel in a strain of horn flies. 428

Effects of certain systemic insecticides in backrubbers for cattle grub control. 132B

Dusting stations and cable backrubbers as self-applicatory devices for control of the face fly. 1915

BACTERIA
Causal agents of bacterial diseases of the silkworm and the use of antibiotics in their control. 263

Potential bacterial pathogens of insects and their characteristics. 312

Bacteria in the perithecia of Hypoxylon pruinatum and their effect on ascospore germination and colony development. 104B

Bone-taint in beef.- II. Bacteria in ischiatic lymph nodes. 1325

BACTERIAL BLIGHT (POINSETTIA)
Recent occurence of bacterial blight of poinsettia in Florida. 8B5

BACTERIAL CANKER (FRUIT)
The source of inoculum for bacterial canker and blast of stone fruit trees. 799

BACTERIAL DISEASES (PLANTS)
Bacterial pathogens of Scolytus multistriatus Marsham as related to crowding. 791

A strain of Pseudomonas fluorescens antagonistic to Pseudomonas phaseolicola and other bacterial plant pathogens. 1010

BACTERIAL SPOT (TOMATOES)
Bacterial spot of tomato as influenced by temperature and by age and nutrition of the host. 912

Physiology of bacterial spot of tomato. 913

BACTERIAL WILT
Occurrence of Pseudomonas solanacearum in virgin soils in costa rica. 9B0

BACTERIAL WILT (BANANAS)
Strains of Pseudomonas solanacearum in indigenous hosts in banana plantations of costa rica, and their relationship to bacterial wilt of bananas. 754

BACTERIAL WILT (EGGPLANT)
Resistance to bacterial wilt in eggplant in North Carolina. 1047

BACTERIAL WILT (POTATOES)
Pseudomonas solanacearum in Israel. 1029

BACTERICIDES
Absorption, excretion, and metabolism of a new antibacterial agent, nalidixic acid. 1643

BACTERIOPHAGES
Bacteriophage for Bacillus thuringiensis Berliner and Bacillus anthracis Cohn. 695

BAGS
The migration of piperonyl butoxide from treated multiwall kraft bags into four commodities. 1477

BAGWORM CASES
Regularities in the size and orientation of juniper fragments attached to the cases of the bagworm, Thyridopteryx ephemeraeformis (Haw.). 67

BAITS
Imported fire ant toxic bait studies: GC-12B3, a promising toxicant. 1639

Tests with attractants and a simple trap for the European earwig, Forficula auricularia. 1939

Use of field bait stations in chemosterilant control of the Mexican fruit fly. 1965

BANANAS
A new species of Dysmicoccus Ferris (Pseudococcidae, Homoptera) on banana. 24B

Physical barriers in relation to Fusarium wilt resistance in bananas. 739

Strains of Pseudomonas solanacearum in indigenous hosts in banana plantations of costa rica, and their relationship to bacterial wilt of bananas. 754

Quarantine problems associated with the importation of bananas from Mexico. 794

Banana fruit-spot caused by Deightoniella torulosa (Syd.) Ell. B91

Oiketicus kirbyi (Lepidoptera: Psychidae) a pest of bananas in Costa Rica. 1313

A precision spray technique for evaluating oils for Sigatoka disease control on individual banana leaves in the field. 1B90

BARBADOS CHERRY

BARBADOS CHERRY
Cercospora bunchoslac, a new leafspot disease of Barbados cherry. 757

BARBERRY BUSH
Survival of physiologic races of Puccinia graminis var. tritici on wheat near barberry bushes. 945

BARK
Bark penetration and uptake of systemic insecticides from several treatment formulations in white pines. 10B8

BARK DISEASE
Tahiti lime bark disease is caused by exocortis virus. 967

BARKING
A comparison of radiograph analysis and bark dissection in estimating numbers of western pine beetle. 43

BARLEY
Field populations on three grain aphid species in Western Oregon. 409

Induced susceptibility of wheat and barley to oat crown and stem rust fungi. 753

Lesion type as a means of evaluating barley lines for resistance to Helminthosporium sativum. 776

Insecticide treatments for aphid control in relation to spread of barley yellow dwarf virus. 7B6

A quick method of preparing barley embryos for loose smut examination. 898

A seedling test for detecting viable Ustilago nuda mycelium following barley seed treatments. B99

Inheritance of 5 genes conditioning pathogenicity in Erysiphe graminis f. sp. hordei on barley. 901

Genes conditioning pathogenicity in Erysiphe graminis f. sp. hordei on barley variety Atlas 46. 902

Transmission of barley yellow dwarf virus to oats by aphids made viruliferous by needle injection. 905

A survey of the world barley collection for resistance to barley yellow dwarf. 969

Systemic insecticides to control greenbugs on spring planted barley. 13B2

BARLEY-JUICE
Effects of salts, detergent, and a barley-juice factor on stability of barley stripe mosaic virus. 750

BARTHRIN
Toxicologic studies on pyrethrin-type esters of chrysanthemumic acid. I. Chrysanthemumic acid, 6-chloropiperonyl ester (Barthrin). 1540

BARTLETT PEARS
Behavior of some Bartlett pear trees on their own roots. 746

BASIDIOSPORES
Effect of culture substrate on the virulence of single-Basidiospore isolates of Pellicularia filamentosa. 993

BATHYPLECTES CURCULIONIS
The alfalfa weevil parasite Bathyplectes curculionis in Illinois and notes on its dispersal. 49

BAYER
The colorimetric determination of o-isopropoxyphenyl-N-methylcarbamate. 143B

BAYER 37342
Polymerization as a means of prolonging effectiveness of orally administered systematic insecticides. 521

BEANS
The influence of pH on growth of Thielaviopsis basicola in culture and the development of Thielaviopsis root rots of poinsetta and bean in soil. 736

Curly top prevention by vector control on snap beans grown for seed. 934

A high-temperature-induced local necrosis associated with the bean rust disease. 973

Vein necrosis, another systemically infectious strain of alfalfa mosaic virus in bean. 1053

A new race of bean rust in Maryland. 1054

Varietal resistance of beans to the Mexican bean beetle. 1078

Laboratory evaluation of several chemical protectants against the southern cowpea weevil, Callosobruchus chinensis, on stored dried beans in Korea. 1379

Parathion studies on bean grown in sterile root culture. 1719

Studies of endosulfan in bean plants by paper and gas chromatography. 1796

BEAUVERIA BASSIANA (BALSAMO) VUILLEMIN
Moths of the European corn borer infected with the fungus, Beauveria bassiana (Balsamo) Vuillemin. 616

BEDDING (LIVESTOCK)
House fly breeding in oak sawdust and peanut hulls used as bedding in calf pens. 135

BEE COMBS
Greater wax moth develops on bumble bee cells. 167

BEEF
Bone-taint in beef.- II. Bacteria in ischiatic lymph nodes. 1325

Residues of endosulfan in meat and milk of cattle fed treated forages. 1432

BEEF CATTLE
Color preference of the horn fly, Haematobia irritans, on beef cattle. 3B4

Control of house flies in bovine feces by a feed additive containing Bacillus thuringiensis var. thuringiensis Berliner. 1342

A study of the dermal treatment of a steer with C14-labeled Imidan. 1567

BEES
Some bees (Apoidea) associated with peanut flowering. 76

A survey of the incidence of nosema disease in California. 366

BELLA VISTA
Viruses in sweet lime rootstock in Bella Vista, Corrientes. 949

BENTGRASS NEMATODE
Use of herbicides to break the life cycle of the bentgrass nematode, Anguina agrostis (Steinbuck 1799) Filipjev 1936. 1278

BENZENE
Toxicologic studies with branched and linear alkyl benzene sulfonates in rats. 1662

BENZENE HEXACHLORIDE
Gamma-BHC liquid seed dressing for the control of turnip flea beetle. 1143

Lindane and BHC in egg yolks following recommended uses for louse and mite control. 1364

Benzene hexachloride emulsion as a summer control of the southern pine beetle. 1551

The estimation of mixtures of DDT and BHC isomers using infrared differential null-analysis. 1B21

BENZIMIDAZOLE
Use of benzimidazole and excised wheat seedling leaves in testing resistance to Septoria tritici. 981

BENZOIC ACID
Determination of polychlorinated benzoic acid herbicide residues by gas chromatography. 1487

BENZOXAZINONE
Tolerance of several grass species to 2-Chloro-s-triazine herbicides in relation to degradation and content of benzoxazinone derivatives. 1744

BERTHOLLETIA EXCELSA
Effect of moisture content on the storage of Brazil nuts. 1371

BETULA
A survey of the sucking insects of the birches in the Maritime Provinces. 232

BIBLIOGRAPHY
Bibliography of reviews, 1949-1959. 716

BIDRIN
The disappearance of residues of bidrin from alfalfa. 1520

Laboratory tests with Bidrin insecticide. 157B

Mechanism of detoxication and synergism of Bidrin insecticide in house flies and soil. 1606

Integration of physico-chemical and biological techniques in specific bioassay, with specific reference to bidrin insecticide. 1864

BIG VEIN (LETTUCE)
Isolation of olpidium brassicae from roots of lettuce showing big-vein symptoms. 734

BINAPACRYL
Resistance induction in Tetranychus telarius with binapacryl. 265

The control of mites on deciduous fruit crops with binapacryl. 1542

BIOCHEMISTRY
Biochemical-radiological determinations of parathion resistance in Aedes micromaculis. 523

Biological and chemical properties of dimethoate and related derivatives. 1556

BIOLOGIA CENTRALI-AMERICANA
Notes on Canthonini of the Biologia Centrali-Americana and descriptions of new species (Coleoptera: Scarabaeidae). 99

BIOLOGICAL ACTIVITY
Synthesis and insecticidal activity of O-methyl O-(2,4,5-trichlorophenyl) phosphoramidothioates and related compounds. 1B15

BIOLOGICAL ASSAY
Bioassay of Bacillus thuringiensis-based microbial insecticides. III. Continuous propagation of the salt-marsh caterpillar, Estigmene acrea. 367

Auxin content of extracts of certain tolerant and susceptible host plants of Toxoptera graminum, Macrosiphum pisi, and Therioaphis maculata and relation to host plant resistance. 11B1

Biological assay of insecticides using the brine shrimp, Artemia salina (L). 152B

Mycotoxins II. The biological assay of aflatoxin in Peking white ducklings. 1543

Arcaricide bioassay: Two organisms suitable for bioassaying specific acaricides. 1B0B

Bioassay of a microbial insecticide containing spores of Bacillus thuringiensis Berliner. 1B49

Integration of physico-chemical and biological techniques in specific bioassay, with specific reference to bidrin insecticide. 1B64

A laboratory technique for bioassay of plant attractants for the boll weevil. 1916

An improved tube closure for biological tests. 1940

A thermal preference method of biossay of the toxicity of insecticidal films to house flies. 1979

BIOLOGICAL CONTROL
Potential of biological control of two-spotted spider mites on strawberries in California. 100

Patasson luna in overwintering eggs of the alfalfa weevil. 223

BIOLOGICAL CONTROL (INSECTS)
Status of the alfalfa weevil biological control program in the eastern United States. 34

Studies on the biological control of the fall webworm, Hyphantria cunea, in Louisiana. 16B

Host specificity studies of Phrydiuchus tarsalis and Phrydiuchus sp. 26B

Integration of the Heliothis nuclear polyhedrosis virus into a biological control program on cotton. 1061

Biological control of the coconut scale, Aspidiotus destructor Sign., in Principe, Portugese West Africa. 1236

BIOLOGICAL CONTROL (WEEDS)
Some concepts on the ecological basis of biological control of weeds. 1320

BIOLOGICAL STAINS
Fluorescent biological stains as markers for Drosophila. 239

BIOLOGY
The twig oak wasp of cork oak- Its biology and control. 1

Seasonal biology of the balsam woolly aphid on Mt. Mitchell, North Carolina. 5

Biology of the lesser cornstalk borer in south Georgia. 126

The influence of certain biological and environmental factors on insecticide tolerance of the lygus bug, Lygus hesperus. 274

Biology of the leafhopper Balbulus maidis at selected temperatures. 354

On the biology of the imported fire ant. 40B

Effects of cold storage on egg viability of the cabbage looper and some aspects of the biology of the progeny survivors. 475

Report and abstracts of the 1959 meeting of the northeastern division of the American Phytopathological Society. 717

BIONOMICS
Studies on the bionomics of the jute stem girdler, Nupserha bicolor postbrunnea Dutt (Col., Cerambycidae). 4B

BIOSHERE
Some considerations of present biospheric contamination by radioactive fallout. 1842

BIOTYPES
Field studies of European corn borer biotypes in the Midwest. 216

Laboratory and field studies of F1 progenies from reciprocal matings of biotypes of the European corn borer. 217

BIRD NESTS
Insects and other invertebrates from nests of the cardinal, Richmondena cardinalis (L.), at London, Ontario. 107

BIRD PESTS
A laboratory method for evaluating chemicals as bird repellents. 1321

BIRD REPELLENTS
A laboratory method for evaluating chemicals as bird repellents. 1321

BIURET

BIURET
Biuret formation in the manufacture of urea. 1837

BLACK FLEAHOPPER
The biology of Spanogonicus albofasciatus. 23

BLACK ROOT ROT
Susceptibility of twenty-three tree species to black root rot. 956

BLACK ROOT ROT (PINUS)
The susceptibility of twenty-three tree species to black root rot. 955

BLACK ROT (CRUCIFERAE)
Studies on control of black rot of Crucifers with antibiotics. 859

BLACK STEM (ALFALFA)
The effects of temperature and moisture on development of black stem of alfalfa. 738

BLADDER
Synergism among oral carcinogens II. Results of the simultaneous feeding of bladder carcinogens to dogs. 1587

BLAST
Variation in isolates of Pseudomonas associated with blast and canker of fruit trees in California. 798

BLAST (FRUIT)
The source of inoculum for bacterial canker and blast of stone fruit trees. 799

BLAST (ONION)
Onion blast or leaf spotting caused by species of Botrytis. 979

BLATTELLA GERMANICA
Inheritance of resistance to DDT in Blattella germanica. 336

Resistance to Telodrin in the German cockroach, Blattella germanica. 337

Influence of repellency on the efficacy of blatticides I. Learned modifications of behavior of the German cockroach. 370

Effects of tepa on the reproductive organs and embryogeny of the german cockroach. 617

BLATTIDAE
Monitoring electrophysiological responses of cockroaches for space research. 638

A simulated-field method of testing residual insecticide deposits against cockroaches. 1460

Some chemical characteristics of a DDT-INDUCED neuroactive substance from cockroaches and crayfish. 1835

BLIGHT (CORN)
Variation in maize seedling blight symptoms with changes in pathogen species, isolate and host genotype. 857

BLIGHT (SESAME)
Corynespora blight of sesame. 1006

BLIGHT (SPINACH)
A new source of resistance to spinach blight. 1036

BLISTER RUST (PINUS STROBUS)
Blister rust fungus inoculations on white pines in mist chambers. 1024

BLISTER RUST (PINUS)
Blister rust fungus inoculations on white pines in mist chambers. 1024

BLOAT
Pectic substances in forages and their relationship to bloat. 720

BLOOD
Anticholinesterases in blood and cattle grubs from cattle treated with ronnel. 445

BLUEBERRIES
Life history and control of a casebearer, Chlamisus cribripennis (Coleoptera:Chrysomelidae), on blueberry. 256

Wild sources of blueberry stunt virus in New Jersey. 840

Necrotic ringspot, a new virus disease of cultivated blueberry. 1025

Studies of two blueberry stem diseases recently found in eastern Massachussets. 1056

The damage control of climbing cutworms in commercial fields of lowbush blueberry. 1277

Effect of temperature on post-harvest decay of blueberry varieties. 1376

Mortality of bumble bees in commercial low-bush blueberry fields dusted with calcium arsenate. 1535

BOGS
Effects of water levels on the overwintering survival and emergence of the larch sawfly in a bog habitat. 104

BOLL ROT (COTTON)
Severity, prevalence, and ecology of cotton boll rots as related to temperature. 976

BOMBUS
Greater wax moth develops on bumble bee cells. 167

Further studies on the food-gathering behaviour of bumble bees (Hymenoptera: Apidae). 440

Mortality of bumble bees in commercial low-bush blueberry fields dusted with calcium arsenate. 1535

BONE-TAINT
Bone-taint in beef.- II. Bacteria in ischiatic lymph nodes. 1325

BONES
Bone-taint in beef.- II. Bacteria in ischiatic lymph nodes. 1325

BORON COMPOUNDS
Influence of boron nutrition of Nicotiana tabacum on the multiplication of tobacco mosaic virus. 984

BOTRYOSPHAERIA RIBIS GROSS AND DUG.
The occurrence of a variety of enzymes hydrolyzing cell wall polysaccharides in apples rotted by Botryosphaeria ribis. 883

BOTRYTIS
Onion blast or leaf spotting caused by species of Botrytis. 979

BOTRYTIS CINEREA
Alteration of the incidence of Botrytis cinerea on tomato by liming the soil. 1001

BOTRYTIS SQUAMOSA
The apothecial stage of botrytis squamosa, cause of tip and leaf blight of onions. 887

BRACHYRHINUS SULCATUS
The black vine weevil Brachyrhinus sulcatus, as a pest of grapes in south central washington. 775

Control of the black vine weevil on concord grapes in central Washington. 1086

BRAIN
Concentration of DDT in brain and other tissues in relation to symptomatology. 1611

BRANCHES
Trunk and branch canker of coffee trees in Guatemala. 999

BRAZIL
Absence of young-leaf symptoms of psorosis in the state of Bahia, Brazil. 930

Occurrence of stem pitting in citrus types in Brazil. 963

BRAZILNUTS
Effect of moisture content on the storage of Brazil nuts. 1371

BREEDING
House fly breeding in oak sawdust and peanut hulls used as bedding in calf pens. 135

BREVICORYNE BRASSICAE
Differential toxicity of insecticides to the cabbage aphid and two associated entomophagous insect species. 1692

BRINE SHRIMP
Biological assay of insecticides using the brine shrimp, Artemia salina (L). 1528

BRITISH COLUMBIA
The spined stink bug: cause of cottony spot in pear in British Columbia. 1266

BRITISH COLUMBIA
Apanteles rubecula Marsh and other parasites of Pieris rapae in British Columbia. 676

BRITISH COLUMBIA
The virus content of flowering cherries at Summerland, British Columbia. 870

BROADBEANS
Variation in susceptibility of soybean pubescent types, broad bean, and runner bean varieties and plant introductions to the potato leafhopper. 1271

BROCCOLI
An evaluation of several insecticides against pests of broccoli. 1638

Identification of metabolites of Zectran insecticide in broccoli. 1803

BROMIDES
Determination of residual bromide in cacao shell and nib. 1531

BROMINATION
Rapid determination of diphenylamine in apples by direct bromination and gas chromatography. 1469

BROMOCHLOROETHANE
Tolerance of avocados to ethylene chlorobromide and ethylene dibromide dipping and fumigation. 1273

Recovery of ethylene chlorobromide from agricultural products. 1859

BROMODAN
Exploratory tests with bromodan as a protectant for wheat against stored-product insects. 1388

BROMOPROPANES
The vapor toxicity of certain bromopropanes to the grape phylloxera under controlled laboratory conditions. 1673

BROMUS
Datura stramonium and Chenopodium hybridum as semiquantitative assay hosts for bromegrass mosaic virus. 773

Influence of soil temperature on seedling blight of smooth bromegrass. 1014

BROMUS INERMIS
Influence of soil temperature on seedling blight of smooth bromegrass. 1014

BROMUS TECTORUM L.
Downy chess grass as a host of the pear psylla. 247

BROWN ROT
Effects of the combination of sodium pentachlorophenoxide and liquid lime-sulfur on the brown-rot fungi. 924

BROWN ROT (CITRUS)
Winter outbreaks of citrus brown rot in Florida. 774

BROWN ROT (PARSNIPS)
A bacterial brown rot of parsnip roots. 756

BROWN-BANDED COCKROACHES
Modification of a vacuum cleaner for capturing German and brown-banded cockroaches. 1989

BROWNING
The biology and ecology of the red-pine needle midge and its role in fall browning of red pine foliage. 110

BRUCHUS BRACHIALIS
Evaluation of the effectiveness of certain insecticides for control of the vetch bruchid. 1216

BUCHNER FUNNEL METHOD
A modification of the Buchner funnel method for transferring and concentrating nematodes. 1315

BUD ROT (CONIFERAE)
Several species of Pholiota associated with root and butt rots of Rocky Mountain conifers. 782

BUD-UNION CREASE
Incidence of bud-union crease in citrus trees grafted on trifoliate rootstock in the Delta del Parana and San Pedro areas of Argentina. 1023

BUD-UNION CREASE
Studies on bud-union crease of citrus trees. 961

BUPRESTIS AURULENTA
A note on the longevity and behaviour of adult golden buprestids, Buprestis aurulenta L. (Coleoptera: Buprestidae under artificial conditions. 614

BUSH REDPEPPERS (VEGETABLE)
Resistance to Phytophthora root rot in pepper. 856

Natural occurrence of potato virus X in field-grown peppers in California. 933

BUTYL SORBATE
Butyl sorbate as an attractant for European chafer. 646

BUTYLATED HYDROXYANISOLE
Food additives, safety: Effect of feeding butylated hydroxyanisole to dogs. 1711

Determination of butylated hydroxyanisole, butylated hydroxytoluene, and ethoxyquin in hydrocarbon-soluble samples. 1807

Food antioxidants:Determination of butylated hydroxyanisole and butylated hydroxytoluene in potato granules by gas-liquid chromatography. 1818

BUTYLATED HYDROXYTOLUENE
Determination of butylated hydroxyanisole, butylated hydroxytoluene, and ethoxyquin in hydrocarbon-soluble samples. 1807

Food antioxidants:Determination of butylated hydroxyanisole and butylated hydroxytoluene in potato granules by gas-liquid chromatography. 1818

C-14
Herbicide uptake and distribution: Synthesis of carbon -14-labeled dalapon and trial applications to soybean and corn plants. 1816

Insecticide solubility: Solubility of carbon-14 DDT in water. 1817

CABBAGE
Does the cabbage aphid carry cabbage virus B both on its mouthparts and at some other site. 926

Plant resistance to insect attack in commercial cabbage varieties. 1214

Field experiments on insecticidal control of lepidopterous larvae on cabbage and cauliflower. 1690

Oils and surfactants alone, and insecticide-oil combinations for aphid control on turnips and cabbage. 1714

CABBAGE LOOPER MOTH
Florescent dyes for mating and recovery studies with cabbage looper moths. 659

CACAO

CACAO
The selective effect of the antibiotic Pimaricine upon growth of several cacao fungi in vitro. 828

Production of heat during fermentation of cacao beans. 854

Determination of residual bromide in cacao shell and nib. 1531

CACAO BEANS
Production of heat during fermentation of cacao beans. 854

CACHEXIA (CITRUS)
Variability of cachexia reactions among varieties of root-stocks and within clonal propagations of citrus. 759

Experimental evidence that cachexia and xyloporosis are caused by the same virus. 771

The question of seed transmission of cachexia-xyloporosis virus. 772

Cachexia and xyloporosis-are they caused by the same virus. 896

CACODYLIC ACID
Bark beetle mortality in trees injected with cacodylic acid (herbicide). 1570

CALCIUM ARSENATE
Mortality of bumble bees in commercial low-bush blueberry fields dusted with calcium arsenate. 1535

CALCIUM CHLORIDE
Salt injury to trees. 1618

CALIFORNIA
A new species of Euxoa Hbn. (Lepidoptera: Noctuidae) from the Sierra Nevada in California. 16

Potential of biological control of two-spotted spider mites on strawberries in California. 100

Periploca nigra, a major cause of dieback of ornamental juniper in California. 120

Observations on the natural control of the pear psylla, Psylla pyricola Forster, in California. 140

The economic significance of Collembola in the Salinas Valley of California. 207

The biology of Pissodes terminalis hopping (Coleoptera: Curculionidae) in California. 219

The large aspen tortrix, Choristoneura conflictana, in California (Lepidoptera: Tortricidae). 244

Oviposition al habits of the rice water weevil California as related to a greenhouse evaluation of seed treatments. 410

Variation in isolates of Pseudomonas associated with blast and canker of fruit trees in California. 798

Occurrence of Cytospora canker in stone fruit trees in California. 876

Rust fungi on native and cultivated rhododendrons in California. 921

Host specialization of dwarf mistletoe on red and white fir in California. 929

Natural occurrence of potato virus X in field-grown peppers in California. 933

Protection of dates from injury caused by the Apache cicada in California. 1106

Control of lawn moths in southern california. 1147

Argentine ant control on citrus in California with granular formulations of certain chlorinated hydrocarbons. 1192

Parasitization of corn earworm eggs on sweet corn silk in Southern California, with notes on larval infestations and predators. 1198

The influence of two systemic organophosphates on growth, fruiting, and yield of cotton in California. 1758

CALIFORNIA SOIL
A tobacco-necrosis-like virus isolated from potato-tuber lesions and California soils. 815

CALORIFIC VALUE
Low caloric value of carobs as the possible cause of growth depression in chicks. 1539

CALTHA PALUSTRIS
Insects associated with flowering Marsh Marigold, Caltha palustris L., at London, Ontario. 108

CANADA
The biology of the mountain-ash sawfly, Pristiphora geniculata (Htg.) (Hymenoptera: Tenthredinidae), in eastern Canada. 61

Note on the occurrence of Anacampsis populella (Clerck) (Lepidoptera: Gelechiidae) in canada. 155

The Taeniothrips of Canada (Thysanoptera: Thripidae). 162

The myzaphidines of Canada (Homoptera: Aphididae). 191

The genus Schistocerca (Orthoptera : Acrididae) in Canada. 234

The discovery of Streblocera in Canada (Hymenoptera: Braconidae). 238

Comparative morphology of some Chrysobothris larvae (Coleoptera: Buprestidae) of eastern Canada. 292

The progress of nymphal development in pest grasshoppers (Acrididae) of western Canada. 571

Development of cattle grubs in Oklahoma cattle imported into Canada. 668

The infestation of Canadian produce inspected in United Kingdom ports between 1953 and 1959. 1140

CANDLING
A method for candling pine sawfly cocoons. 678

CANKER (COFFEE)
Trunk and branch canker of coffee trees in Guatemala. 999

CANKER (FRUIT)
Variation in isolates of Pseudomonas associated with blast and canker of fruit trees in California. 798

Occurrence of Cytospora canker in stone fruit trees in California. 876

Studies of two blueberry stem diseases recently found in eastern Massachussets. 1056

CANNED FOOD
The effect of some fungicides on the flavor of canned strawberries. 1621

CANTALOUPES
Loss caused by late infection of cantaloupes by the curly top virus. 800

Types of injuries on cantaloupe leaves associated with guttation. 841

Honey bee visitors and fruit set of cantaloupes. 1185

CARBAMATES
Carbamate-induced systemic repellency to the boll weevil on cotton. 1178

Specificity of carbamate induced esterase inhibition in mice. 1547

Temperature effects on toxicity of synergized carbamate insecticides on house flies. 1593

Carbamate insecticides: multisubstituted chloro-and methylphenyl n-methylcarbamates. 1647

Insecticidal carbamates:comparison of the activities of N--methyl and N,N-dimethylcarbamates of various phenols. 1649

Silicon-containing carbamate insecticides. 1650

Carbamate insecticides: Synergism by organothiocyanates. 1825

Carbamate insecticides: Insecticidal properties of some optically active substituted phenyl-n-methylcarbamates. 1829

The colorimetric determination and paper chromatography of some aromatic carbamates. 1852

CARBAMOYLOXY PHOSPHORODITHOATES
Chemical structure and toxicity of some carbamoyloxy phosphorodithioates to susceptible and organophosphorus-resistant strains of mites. 1628

CARBARYL
Resistance to DDT in the adult codling moth and reference curves for guthion and carbaryl. 282

Carbaryl, phosphamidon, and DDT tests on the western hemlock looper in Washington. 313

Seed treatment with phorate, disulfoton, and other insecticides to control pea insects in Iraq. 1060

Residues in body tissues of livestock sprayed with Sevin or given Sevin in the diet. 1446

Residues of Sevin in whole milk from sprayed and dusted cows. 1455

Insecticide residues in milk: The effects of feeding high levels of Sevin on residue, flavor, and odor of the milk of dairy cattle. 1471

Determination of Sevin insecticide and its metabolites in poultry tissues and eggs. 1482

Sevin residues in poultry products. 1499

Mammalian toxicity of 1-naphthyl-N-methylcarbamate (Sevin insecticide. 1566

Further airplane spray tests with carbaryl against gypsy moth in New York. 1577

Insecticidal properties of sevin against some stored-grain insects. 1592

Effectiveness of insecticides against the sorghum webworm in sorghum heads. 1613

The metabolism of Sevin in dairy cows. 1870

CARBOHYDRATES
Carbohydrate reserves in grafted plants of potato varieties resistant to virus X. 742

CARBON
Soil effects on pesticides:Determination of carbon in organic soils by oxygen flask combustion. 1412

CARBON DIOXIDE
Influence of fumigation and age on carbon dioxide production of some stored-product insects. 662

CARBON DISULFIDE
Dosage-time relationships between 80:20 (CCL4: CS2) and adult rice weevils, Sitophilus oryzae. 1389

CARBON TETRACHLORIDE
Dosage-time relationships between 80:20 (CCL4: CS2) and adult rice weevils, Sitophilus oryzae. 1389

Fumigant residues: Retention of acrylonitrile and carbon tetrachloride by shelled walnuts fumigated with Acrylon. 1434

CARBON-14
Studies on uptake and translocation of C14-labeled p-dimethylaminobenzenediazo sodium sulfonate (Dexon) by sugar beet seedlings. 1747

CARBOPHENOTHION
Seed treatment with phorate, disulfoton, and other insecticides to control pea insects in Iraq. 1060

Insecticide-miticide residues: Determination of Trithion crop residues by cholinesterase inhibition measurement. 1511

The control of Ripersia oryzae green, a mealybug of the paddy plant in West Bengal. 1550

Acute and subacute toxicity of Trithion and the dimethyl homolog. 1712

Preliminary studies of the toxicity of carbophenothion and methyl trithion in livestock. 1717

CARCINOGENS
A study of the possible carcinogenicity of irradiated foods. 1370

A carcinogenicity evaluation of potassium arsenite and arsanilic acid. 1436

Synergism among oral carcinogens II. Results of the simultaneous feeding of bladder carcinogens to dogs. 1587

CARDINAL
Insects and other invertebrates from nests of the cardinal, Richmondena cardinalis (L.), at London, Ontario. 107

CARPOCAPSA POMONELLA
Resistance to DDT in the adult codling moth and reference curves for guthion and carbaryl. 282

Effects of gamma radiation on codling moth eggs. 447

A quick method for sex determination of codling moth pupae. 562

Effect of heat on the fertility of the codling moth, Carpocapsa pomonella (L.) (Lepidoptera:Olethreutidae. 569

Suppression of the reproductive potential of the codling moth by gamma irradiated males in caged orchard trees. 709

CARRIERS
The role of carriers in the performance of granular formulations of parathion for mosquito control. 538

CARROTS
Aster yellows control in head lettuce and carrots in Prince Edward Island. 1248

CARTHAMUS TINCTORIUS L.
Development of safflower varieties resistant to Phytophthora root rot. 1013

CARTONS
Within-package ethylene dibromide fumigation of mangoes and grapefruit in fiberboard cartons to destroy Mexican fruit fly infestations. 1392

CASEBEARER
Life history and control of a casebearer, Chlamisus cribripennis (Coleoptera:Chrysomelidae), on blueberry. 256

CASEIN HYDROLYZATES
Nutritional studies on the genus Hirsutella: Iii. Acid-hydrolyzed casein and amino acid combinations as sources of nitrogen. 507

CASTOR BEAN
Symptoms of Verticillium wilt of castor bean. 904

CATALYTIC OXIDATION
Soil fumigant determination: Extraction and determination of ethylene dibromide in soils. 1836

CATENARIA
Growth studies of a Catenaria sp. infecting nematodes. 1279

CATTLE
The reproductive capacity of female Boophilus annulatus collected from cattle dipped in arsenic or coumaphos. 403

Antlcholinesterases in blood and cattle grubs from cattle

CATTLE DIET
treated with ronnel. 445

Development of cattle grubs in Oklahoma cattle imported into Canada. 668

Pectic substances in forages and their relationship to bloat. 720

Face fly and horn fly control on cattle - 1962-1964. 1337

Field tests with insecticides for the control of ticks on livestock. 1341

Tests against face flies on cattle in New Jersey during 1961. 1344

Control of flies on cattle by frequent, low-volume mist spray application of clodrin. 1345

Induced buildup of populations of Bovicola bovis on cattle in Oregon. 1352

Area population control of heel flies by Ruelene pour-on application annually to cattle. 1355

The effect of radiation to pyrethrins applied to cattle. 1356

Fly control in feces from cattle fed Co-ral. 1360

Experiments for control of the face fly in Virginia. 1363

Irritation of naled mist sprays to cattle. 1366

The common cattle grub in cattle in southwestern Texas. 1369

Control of ticks on cattle with toxaphene applied by power sprayer and spray race. 1369

Residues in cattle tissues following back-line and spray applications of trichlorfon. 1422

Residue deposition of co-ral in the tissues of back-line-treated cattle. 1423

Residues of endosulfan in meat and milk of cattle fed treated forages. 1432

Residues of Sevin in whole milk from sprayed and dusted cows. 1455

Factors contributing to the loss of insecticide deposits on cattle. 1516

Menazon as a systemic insecticide in cattle. 1603

Urea poisoning of cattle. 1659

A photographic technique for recording distribution and loss of insecticides on cattle. 1876

CATTLE DIET
Influence of cattle diet on survival of horn fly larvae. 533

Effect of bovine diet on face fly development - A preliminary report. 654

CATTLE GRUB
Free choice feeding of ronnel mineral block and granules for face fly, horn fly, and cattle grub control. 1347

The common cattle grub in cattle in southwestern Texas. 1368

CATTLE LOUSE
Induced buildup of populations of Bovicola bovis on cattle in Oregon. 1352

An investigation of the cattle louse problem. 1358

CATTLE MANURE
Influence of cattle diet on survival of horn fly larvae. 533

CAULIFLOWER
Purification and properties of cauliflower mosaic virus. 936

Sequential sampling for use in control of the cabbage looper on cauliflower. 1124

Field experiments on insecticidal control of lepidopterous larvae on cabbage and cauliflower. 1690

CECIDOMYIIDAE
Life history and habits of a midge, Contarinia washingtonensis Johnson (Diptera: Cecidomyiidae), in Douglas-fir cones. 86

Control of the midge Glyptotendipes paripes with low-volume aerial sprays of malathion. 559

CEDRUS
Life history and habits of a midge, Phytophage thujae Heslin (Diptera: Cecidomyiidae) in western red cedar. 87

CELAMA SORGHIELLA
Effectiveness of insecticides against the sorghum webworm in sorghum heads. 1613

CELL NUCLEUS
The diploid nucleus of Puccinia carthami in unstained water mounts. 1770

CELL WALL
The occurrence of a variety of enzymes hydrolyzing cell wall polysaccharides in apples rotted by Botryosphaeria ribis. 883

CELLS
Action of Latrodectus mactans tredecimguttatus venom and fractions on cells cultivated in vitro. 1705

CELLULOLYTIC ENZYMES
Pectinolytic and cellulolytic (Cx) enzyme production by cucurbit anthracnose fungi. 1804

CENTRAL AMERICA
Notes on Canthonini of the Biologia Centrali-Americana and descriptions of new species (Coleoptera: Scarabaeidae). 99

CENTRAL AMERICA
Serious increase of cotton whitefly and virus transmission in Central America. 121

CENTRAL NERVOUS SYSTEM
Intraventricular injection of venom. 1683

CENTRIFUGATION
Purification by density-gradient centrifugation, electron microscopy, and properties of Cymbidium mosaic virus. 777

CENTRUROIDES VITTATUS
Laboratory studies of the effect of Dri-Die 67 on the tatus. 586

CEPHUS CINCTUS
A method of rearing larvae of the wheat stem sawfly Cephus cinctus Nort. (Hymenoptera: Cephidae), under artificial conditions. 146

Resistance of spring wheats to the wheat stem sawfly, Cephus cinctus Nort. (Hymenoptera: Cephidae II. resistance to the larva. 1136

Application of systemic insecticides as seed treatment to protect wheat plants against grasshoppers and wheat stem sawfly. 1238

Field-plot tests of chemicals for wheat stem sawfly control. 1256

CERATITIS CAPITATA
Tert-butyl and tert-pentyl esters of 6-methyl-3-cyclohexene-1-carboxylic acid as attractants for the Mediterranean fruit fly. 296

Volatility and attractiveness to the Mediterranean fruit fly of trimedlure and its isomers, and a comparison of its volatility with that of seven other insect attractants. 519

Artificial egging receptacles for three species of Tephritid flies. 1976

CERATOCYSTIS FAGACEARUM
Bionomics of the bark beetle Pseudopityophthorus pruinosus with special reference to its role as a vector of oak wilt, Ceratocystis fagacearum. 18B

Distribution of Ceratocystis fagacearum in roots of wilt-infected oaks in North carolina. 749

CERATOCYSTIS FIMBRIATA VAR. PLANTI
Esters produced by endoconidial-forming fungi. 1733

CERATOPOGONIDAE
Further observations on the effectiveness of chemically treated screens in killing biting midges, Culicoides sanguisuga (Diptera: Ceratodogonidae). 1932

CERATOSTOMELLA FIMBRIATA
Similar metabolic alterations induced in sweet potato by poisonous chemicals and by Ceratostomella fimbriata. 1B00

CERCOPIDAE
Observations on the biology and cultural-insecticidal control of Prosapia bicincta, a spittlebug, on coastal bermudagrass. 1069

CERCOSPORA ANTIRRHINI
Cercospora blight of snapdragon. B43

CERCOSPORA BUNCHOSIAE
Cercospora bunchosiae, a new leafspot disease of Barbados cherry. 757

CEREAL LEAF BEETLE
Resistance of small grains to the cereal leaf beetle. 111B

Larval growth as a method of screening Triticum sp. for resistance to the cereal leaf beetle. 122B

Low-volume concentrate sprays applied by aircraft for control of the cereal leaf beetle. 1267

Ground-applied insecticides against the cereal leaf beetle. 1964

CEREAL RUSTS
Chemotherapy of cereal rusts with a new antibiotic. 7B3

CESIUM ISOTOPES
Determination of fallout cesium-137 in animal and plant tissues. 1553

Dietary considerations of the radionuclide contamination of nonmilk foods. 1706

CESIUM-137
Sterilization of onion maggots by irradiation with cesium-137. 517

Determination of fallout cesium-137 in animal and plant tissues. 1553

CEYLON
A biological and ecological study of the rice pentatomid bug dept. of agriculture, peradeniya, ceylon Scotinophara lurida (Burm.) in.Ceylon. 56

CHAETOCNEMA PULICARIA
Field insecticide screening tests against the corn flea beetle. 1131

CHAETOSIPHON FRAGAEFOLII
Apparent increase in populations of the strawberry aphid caused by phorate and disulfoton. 603

Duration of control of the strawberry aphid by several chemicals. 1234

CHELATION
Reduced fecundity of the two-spotted spider mite on metal-chelate-treated leaves. 647

CHEMICAL ACTIVATION
Activation of guthion by tissue preparaions from the American cockroach. 544

CHEMICAL CONTROL (INSECTS)
Chemical control of the pale western cutworm infesting wheat in Alberta, Canada. 450

Observations on the biology and cultural-insecticidal control of Prosapia bicincta, a spittlebug, on coastal bermudagrass. 1069

Tomato yields and leaf miner infestations and a sequential sampling plan for determining need for control treatments. 1269

Chemical evaluation of pesticide residues on strawberries. 145B

CHEMICAL CONTROL (NEMATODES)
Chemical control of plant-parasitic nematodes in plant roots. 1312

CHEMICAL CONTROL (PESTS)
Report and abstracts of the 1959 meeting of the northeastern division of the American Phytopathological Society. 717

CHEMICAL CONTROL (PLANT DISEASES)
Half-life of effectiveness against stem rust of systemic chemicals in wheat seedlings. 727

Nitrogen supplement in the Louisiana-Mississippi river delta as a possible control for Verticillium wilt of cotton. 914

Curly top prevention by vector control on snap beans grown for seed. 934

CHEMICAL INSECTICIDES
Encapsulation as a technique for formulating microbial and chemical insecticides. 1676

CHEMICAL SYNTHESIS
Herbicide uptake and distribution: Synthesis of carbon -14-labeled dalapon and trial applications to soybean and corn plants. 1B16

Insecticide toxicity: Preparation and biological activity of a series of halogenated ethyl and vinyl dimethyl phosphate esters. 1B46

Fungicide evaivation: Fungicidal activity of some new amino alcohols synthesized from citrus ($)-limonene. 1B56

CHEMICALS
Effect of chemical and microbial insecticides on several insect pests of lettuce in southern California. 604

A method of evaluating fungicides in the soil under controlled conditions. 944

Field-plot tests of chemicals for wheat stem sawfly control. 1256

Comparison of Bacillus thuringiensis Berliner var. thuringiensis and chemical insecticides for control of the alfalfa caterpillar. 1293

Chemical control of slugs affecting vegetables and strawberries in thePacific Northwest. I297

Studies on the removal of embedded lone star ticks Amblyomma americanum. 1349

Toxicological studies of compound VC 1-13 in livestock. 1367

Effects of certain insecticides on earthworms. 15B9

The effects of various chemicals on eggs of the yellow-fever mosquito, Aedes aegypti. 1631

The fumigant toxicity of two new chemicals to stored-product insects. 1697

Effects of chemicals on European corn borer eggs. 1710

New approved common names of insecticides. III. . 1814

CHEMISTRY
A method and machine for detecting living internal insect infestation in wheat. 1096

Chemical evaluation of pesticide residues on strawberries. 145B

Specificity of diarylhaloethane-dehydrohalogenase of susceptible and DDT-RESISTANT house flies. 1812

CHEMORECEPTORS

Spread factor variation for oil-base, aerial sprays. 1845

CHEMORECEPTORS
A comparison of chemoreceptor and whole-fly responses to DDT and parathion. 620

CHEMOSTERILANTS
Chemosterilization and mating behavior of male house flies. 327

Compounds causing sterility in adult house flies. 387

A field experiment with apholate as a chemosterilant for the control of house flies. 399

Chemosterilization of house flies by treatment in the pupal stage. 400

A comparison of techniques for screening chemosterilants of house flies and screw-worm flies. 401

Chemical induction of sterility in the stable fly. 425

Hempa and apholate as chemosterilants for the boll weevil. 430

Evaluation of compounds affecting the reproductive potential of the plum curculio. 432

Antifertility effect of the chemosterilant apholate on the male boll weevil. 433

Insect chemosterilants: incorporation of 5-fluorouracil into house fly eggs. 469

Laboratory techniques for evaluating hempa and other chemosterilants against the Mexican fruit fly. 518

Effect of three chemosterilants on house fly longevity and sterility. 542

Temporary and permanent sterilization of house flies with chemosterilants. 557

2-Imidazolidinone as an insect growth inhibitor and chemosterilant. 608

Tepa for sterilizing male carpenterworms. 622

Potentialities and progress in the development of chemosterilants for insect control. 702

Structure-activity relationships in analogs of tepa and hempa. 1568

Laboratory evaluation of certain chemosterilants against the gypsy moth. 1576

Effects of some chemosterilants on the viability of eggs, fecundity, mortality, and mating of the cabbage looper. 1615

Results of cage experiments with sterile male releases and a chemosterilant technique for control of cabbage looper populations. 1623

Chemosterilization of house flies fed certain ethylenimine derivatives. 1665

Mammalian and insect metabolism of the chemosterilant Thiotepa. 1666

Insect sterilant experiments in outdoor cages with apholate, metepa, and four bifunctional aziridine chemicals against the house fly. 1675

Evaluation of apholate and tepa as chemosterilants for the fall armyworm. 1715

Use of field bait stations in chemosterilant control of the Mexican fruit fly. 1965

CHEMOSTERILIZED
Determination of tepa residues on chemosterilized Mexican fruit flies. 1444

CHEMOTAXIS
Chemotaxis of zoospores for root exudates in relation to infection by Phytophthora cinnamomi. 1055

CHEMOTHERAPEUTANTS
Effect of charge of ionized chemotherapeutants on their translocation through xylem. 1738

CHEMOTROPISM
Methods of evaluating the chemotropic response of boll weevils to extracts of the cotton plant and various other substances. 546

CHENOPODIUM HYBRIDUM
Datura stramonium and Chenopodium hybridum as semiquantitative assay hosts for bromegrass mosaic virus. 773

CHENOPODIUM MURALE
Field occurrence of tobacco mosaic virus in tomato and Chenopodium murale. 730

CHERMES PICEAE
Seasonal biology of the balsam woolly aphid on Mt. Mitchell, North Carolina. 5

Observations on the effectiveness and biology of the European predator Laricobius erichsonnii rosen (Coleoptera: Derodontidae) in Oregon and Washington. 19

Some new infestations of the balsam woolly aphid in North Carolina, with possible modes of dispersal. 1063

Aphidecta obliterata (Coleoptera: Coccinellidae), an introduced predator of the balsam woolly aphid, Chermes piceae (Homoptera: Chermidae), established in North Carolina. 1254

CHERRIES
Leaf enations in apple inoculated from cherry. 869

The virus content of flowering cherries at Summerland, British Columbia. 870

Dead button, a non-transmissible disorder of late Montmorency cherry. 1030

Flowering cherry, a reservoir of the little cherry virus. 1043

CHICKENS
Feed additive residues: Determination of 3,5-dinitro-o-toluamide (Zoalene) in chicken tissues. 1523

Feed additive residues: Determination of 3-amino-5-nitro-o-toluamide (ANOT) in chicken tissues. 1530

The effects of coumaphos on poultry and its residues in tissue and eggs. 1687

CHICKS
Supplementation of chick diets with vitamin E to improve meat quality. 1323

Dimensions of the clear areas in the skin of chicks that resulted from the feeding by larvae of two strains of Trombicula splendens at different periods. 1332

In vivo studies of tissue reaction in chicks resulting from the feeding by larvae of Trombicula splendens. 1334

Differential susceptibility of maggots of several species to droppings from chickens fed insecticide-treated rations. 1359

Methoxychlor in eggs and chicken tissues. 1508

Metabolic stability of radioactive arsanilic acid in chickens. 1510

Low caloric value of carobs as the possible cause of growth depression in chicks. 1539

Metabolism of arsanilic acid. I. Metabolic stability of doubly labeled arsanilic acid in chickens. 1663

Metabolism of arsanilic acid. II. Localization and type of arsenic excreted and retained by chickens. 1664

Acute and subacute toxicity of several insecticides to chicks. 1688

Acute and subacute toxicity of several organophosphorus insecticides to chicks. 1689

CHITIN
Superior media for isolation of actinomycetes from soil. 1765

CHITIN SYNTHETASE.
The fractionation and solubilization of Prodenia eridania chitin synthetase. 480

CHLAMYDOSPORES
Method of chlamydospore germination of isphacelotheca reillana in soil. 1721

CHLORDANE
The effect of heptachlor and chlordane on the foraging activity of imported fire ants. 498

Stimulatory effects of chlordane on hepatic microsomal drug metabolism in the rat. 1610

CHLORINE
The status of boll weevil resistance to chlorinated hydrocarbon insecticides in Texas. 308

CHLORO-PHENYL N-METHYLCARBAMATES
Carbamate insecticides: multisubstituted chloro-and methylphenyl n-methylcarbamates. 1647

CHLOROBENZILATE
Microcoulometric gas chromatographic analysis of grapes and cottonseed for chlorobenzilate residues. 1433

CHLOROHYDROCARBONS
Mechanisms of insect resistance to the chlorohydrocarbon insecticides. 304

CHLOROPIDAE
Resistance in the eye gnat Hippelates collusor to soil insecticides. 537

Occurence of eye gnats (Hippelates ssp.) in the central San Joaquin Valley, California. 685

CHOLESTEROL
Cholesterol analog utilization by grasshoppers. 478

CHOLINESTERASES
Anticholinesterases in blood and cattle grubs from cattle treated with ronnel. 445

Insecticide residues:Determination of residues of phorate and its insecticidally active metabolities by cholinesterase inhibition Part I. Basic method Part II. Alternative sample preparation and recovery data. 1450

Insecticide-miticide residues: Determination of Trithion crop residues by cholinesterase inhibition measurement. 1511

Inhibition of cholinesterase and ali-esterase in parathion and paraoxon poisoning in the house fly. 1552

CHORISTONEURA FUMIFERANA
Determining trends in western spruce budworm egg populations. 18

Site of spruce budworm egg masses on their preferred hosts in the Lake States. 252

Diatomaceous earth tested against spruce budworm. 631

Spray deposit on oil-sensitive cards and spruce budworm mortality. 1641

CHORISTONEURA PINUS
A sampling unit for the jack-pine budworm, Choristoneura pinus. 1156

CHROMAPHIS JUGLANDICOLA
Initial field observations in California on Trioxys pallidus (Haliday), a recently introduced parasite of the walnut aphid. 1057

Laboratory tests with Bidrin insecticide. 1578

CHROMATOGRAPHY
Respiration measurement of Tribolium confusum by gas chromatography. 324

Identifying two sweet potato viruses with paper chromatography. 867

Determination of phosphine in air by gas chromatography. 1408

Gas chromatographic and colorimetric measurement of dimethoate residues. 1421

Method for phosphamidon residue analysis. 1426

Determination of amiben in tomatoes by electron affinity gas chromatography. 1427

Microcoulometric gas chromatographic analysis of grapes and cottonseed for chlorobenzilate residues. 1433

The electron affinity detector in pesticide residue analysis. 1468

Rapid determination of diphenylamine in apples by direct bromination and gas chromatography. 1469

Herbicide residues:The determination of ethyl N,N-di-n-propylthiolcarbamate (EPTC) in soil by gas chromatography. 1478

Chemical studies on the herring (Clupea harengus). XI Preliminary gas-chromatographic study of volatile sulphur compounds produced during the cooking of herring. 1479

Determination of polychlorinated benzoic acid herbicide residues by gas chromatography. 1487

Rapid cleanup of dairy products for analysis of chlorinated insecticide residue by electron capture gas chromatography. 1490

Forced volatilization cleanup of butterfat for gas chromatographic evaluation of organochlorine insecticide residues. 1509

Insectide residues: Residue analysis of a chlorinated insecticide (Thiodan) by combination of gas chromatography and infrared spectrophotometry. 1538

Pesticide residue analysis: Microcoulometric gas chromatography of pesticides. 1580

Systemic fungicides:The translocation and persistence of tritium-labeled cycloheximide in eastern white pine seedlings. 1759

Studies of endosulfan in bean plants by paper and gas chromatography. 1796

Quantitative gas chromatography of isomers of insect repellent N,N-diethyltoluamide. 1805

Food antioxidants:Determination of butylated hydroxyanisole and butylated hydroxytoluene in potato granules by gas-liquid chromatography. 1818

Insecticide assay:Chromatographic separation of active components of natural pyrethrins and their characterizations. 1819

Simultaneous quantitative determination of lindane and DDT gas chromatography. 1841

The colorimetric determination and paper chromatography of some aromatic carbamates. 1852

Purification of pesticides:Multimolecular adsorption chromatography for purification of gram quantities of pesticides. 1855

The identification of 3,5-dinitro-o-toluamide (Zoalene) and possible metabolites by paper chromatography. 1863

The quantitative determination of heptachlor in pesticide formulations by gas chromatography. 1869

Identification of 3, 4-methylenedioxyphenyl synergists by thin-layer chromatography. 1878

CHRYSANTHEMUMIC ACID

Gas chromatography retention times and sensitivity data for insecticides and herbicides. 1880

New spray reagents for the detection of thiophosphate insecticides on paper chromatograms. 1902

CHRYSANTHEMUMIC ACID
Toxicologic studies on pyrethrin-type esters of chrysanthemumic acid. I. Chrysanthemumic acid, 6-chloropiperonyl ester (Barthrin). 1540

CHRYSOMPHALUS AONIDUM
Establishment of Aphytis holoxanthus as a parasite of Florida red scale in Florida. 31

CHRYSOMYXA LEDI VAR. RHODODENDRI
Rust fungi on native and cultivated rhododendrons in California. 921

CIBORINIA CANDOLLEANA (LEV., WHET
Occurrence of the sclerotial state of Ciborinia candolleana (Lev.) Whet in the United States of America. 737

CICADELLIDAE
Leafhoppers attacking alfalfa in the Salt River Valley of Arizona. 1195

CICINDELIDAE
The female genitalia of four species of tiger beetles (Coleoptera: cicindelidae). 385

CIGAR-WRAPPER TOBACCO
Insecticides for tobacco flea beetle control on cigar-wrapper tobacco. 1247

CIGARETTE SMOKE
Determination of insecticide residues on green and flue-cured tobacco and in main-stream cigarette smoke. 1437

CIODRIN
The metabolism of P32-labeled Ciodrin in a lactating goat. 1329

Oil-based and water-based ciodrin sprays for fly control on dairy cattle. 1330

Control of flies on cattle by frequent, low-volume mist spray application of ciodrin. 1345

CIPC
Chronic toxicologic studies on isopropyl N-(3-chlorophenyl) carbamate (CIPC) . 1635

CITRIC ACID
Turnover of certain Krebs citric-acid intermediates in healthy and rusted tissues. 1756

CITRUS
Laboratory methods for rearing rust mites (Phyllocoptruta oleivora and Aculus pelekassi) on citrus. 581

Variability of cachexia reactions among varieties of rootstocks and within clonal propagations of citrus. 759

Presence of seedling yellows complex in the citrus of South India. 766

Evaluation of soil fungicides against Fusarium solani isolated from feeder roots of citrus trees. 767

Winter outbreaks of citrus brown rot in Florida. 774

Effect of stem girdling of citrus seedlings on size of Phytophthora gummosis lesions. 788

Vegetative growth of Phytophthora spp. on differential synthetic media as an aid in separating isolates pathogenic to citrus. 789

Evaluation of ammonia-generating formulations for control of citrus fruit decay. 795

Infectious variegation of citrus found in Florida. 822

The production and use of zoospore suspensions of phytophthora spp. for investigations of diseases of citrus. 860

Evidence that xyloporosis virus does not pass through seeds of Palestine sweet lime. 925

Incidence of different types of psorosis in citrus varieties in the state of Sao Paulo. 954

Studies on bud-union crease of citrus trees. 961

Susceptibility of citrus varieties to leaf-curl virus. 962

Occurrence of stem pitting in citrus types in Brazil. 963

Reaction of types of citrus as scion and as rootstock to xyloporosis virus. 968

Pathogenicity on citrus of Thielaviopsis basicola and its isolation from field roots. 1019

Pathogenicity on citrus of Thielaviopsis basicola and its isolation from field roots. 1021

Incidence of bud-union crease in citrus trees grafted on trifoliate rootstock in the Delta del Parana and San Pedro areas of Argentina. 1023

Argentine ant control on citrus in California with granular formulations of certain chlorinated hydrocarbons. 1192

The sorption and retention of ethylene dibromide by fumigated citrus and avocado fruits. 1237

Citrus varieties, hybrids, species and relatives evaluated for resistance to the burrowing nematode, Radopholus similis. 1292

A field technique for oil deposit determination on citrus through colorimetric analysis. 1452

Design and performance of a laboratory air-blast sprayer. 1968

CITRUS RETICULATA AUSTERA
Meloidogyne from Taiwan and New Delhi. 1283

CLADOSPORIUM FULVIUM
On the resistance of tomato varieties to Cladosporium fulvium. 821

CLERID BEETLE
The clerid beetle, Thanasimus dubius, as a predator of the southern pine beetle. 224

CLONES
Factors affecting resistance of alfalfa clones to adult feeding and oviposition of the alfalfa weevil in the laboratory. 661

Clones of red clover resistant to four isolates of bean yellow mosaic virus. 784

A genetic abnormality in an Idaho clone of fragaria vesca. 830

Factors affecting resistance of selected alfalfa clones to the potato leafhopper. 1194

CLOVER
Biochemical studies of the clover root tumors induced by wound-tumor virus. 937

CLUPEA HARENGUS
Chemical studies on the herring (Clupea harengus). XI Preliminary gas-chromatographic study of volatile sulphur compounds produced during the cooking of herring. 1479

CO-RAL
Low-volume dermal applications and injections of Co-Ral for systemic control of cattle grubs. 1338

Residue deposition of co-ral in the tissues of back-line-treated cattle. 1423

Insecticide residues in milk: Excretion of Co-Ral in the milk of dairy cattle. 1513

Insecticide assay: Assay of Co-Ral in technical material and formulated products. 1838

COCCIDIOSIS
Control of northern fowl mites, Ornithonyssus sylvarium, with sulfaquinoxaline. 1343

COCCINELLIDS
Toxicity and acceptance of some pesticides fed to parasitic Hymenoptera and predatory coccinellids. 1548

COCCOIDEA
Control of the scale Pulvinaria psidii on Ixora. 13B4

COCHLICELLA BARBARA (L)
Methyl bbromide, sulfuryl fluoride, and other fumigants against quarantinable Cochlicella and Theba snails. 167B

COCHLIOBOLUS CARBONUM
The genetics of compatibility in Cochliobolus carbonum. 919

COCHLIOMYIA HOMINIVORAX (COQUEREL)
Some effects of irradiation on Cochliomyia hominivorax. 35B

COCHLIOMYIA HOMINIVORAX
Nocturnal resting places of the screw-worm fly. B9

Local distribution of released laboratory-reared screw-worm flies in relation to water sources. 90

Seasonal abundance of the screw-worm in northern mexico. 91

Mating behavior of the screw-worm fly as affected by differences in strain and size. 266

Influence of aeration during gamma irradiation of screw-worm pupae. 2B9

Sexual aggressiveness of male screw-worm flies measured by effect on female mortality. 290

A comparison of the amounts of metepa required to sterilize the screw-worm fly and the stable fly. 326

The induction of sexual sterility in the screw-worm fly by antimetabolites and alkylating agents. 346

Observations on the role of light, temperature, age, and sex in the response of screw-worm flies to attractants. 347

A comparison of techniques for screening chemosterilants of house flies and screw-worm flies. 401

Mutants and linkage groups of the screw-worm fly. 703

COCONUTS
The availability of the coconut bug, Pseudotheraptus wayi Brown, (Coreidae). 231

Rearing Pseudotheraptus wayi Brown (Coreidae) a pest of coconuts in East Africa, evaluations of its susceptibility to various insecticides. 674

Biological control of the coconut scale, Aspidiotus destructor Sign., in Principe, Portugese West Africa. 1236

COFFEE
Trunk and branch canker of coffee trees in Guatemala. 999

Nemic parasites of coffee in Guatemala. 12B2

COFFEE LEAF MINER
Effect of some oil insecticide combinations on coffee leaf miner. 590

COLD STORAGE
Influence of cold storage on the viability of alfalfa weevil eggs and feeding ability of hatching larvae. 341

Effects of cold storage on egg viability of the cabbage looper and some aspects of the biology of the progeny survivors. 475

Biochemical changes associated with the development of low-temperature breakdown in apples. 1373

COLEOPTERA
A walk-in light trap installation with a moth-beetle separator. 1917

COLIAS EURYTHEME
Comparison of Bacillus thuringiensis Berliner var. thuringiensis and chemical insecticides for control of the alfalfa caterpillar. 1293

COLLEMBOLA
The economic significance of Collembola in the Salinas Valley of California. 207

COLLETOTRICHUM CAPSICI (SYD)
The effect of manganese ethylene bisdithiocarbamate (Maneb) on some chemical constituents of Colletotrichum capsici. 1654

Effect of copper and glyodin fungicides on amino acid and sugar content and oxygen use of Colletotrichum capsici. 1793

COLONY VIGOR
An improved method for determining colony vigor of western harvester ants, Pogononomyrmex occidentalis. 577

COLOR
Synonymy and color variation in the fall webworm, Hyphantria cunea Drury (Lepidoptera : Arctiidae). 154

The inheritance of larval color patterns in Neodiprion pratti Dyar (Hymenoptera: Diprionidae). 706

COLOR CHARACTERISTIC
A color characteristic for sexing live adult Lesser Grain Borers. 220

COLOR MUTANTS
Induced color mutants in Rhynchosporium secalis. 1754

COLOR PREFERENCE
A note on colour preferences of some Homoptera and Thysanoptera in British Columbia. 246

Color preference of the horn fly, Haematobia irritans, on beef cattle. 3B4

COLORIMETRY
Gas chromatographic and colorimetric measurement of dimethoate residues. 1421

Colorimetric determination of Dexon residues in crops. 1424

Herbicide residues: A colorimetric method for the determination of EPTC residues in crops and soils. 1430

The colorimetric determination of o-isopropoxyphenyl-N-methylcarbamate. 143B

A field technique for oil deposit determination on citrus through colorimetric analysis. 1452

Colorimetric method for the estimation of dimethoate residues. 1463

Insecticide residues: Colorimetric determination of residues of phorate and its insecticidally active metabolites. 1464

Colorimetric method for the determination of ethion of residues. 1466

Colorimetric determination of 6-methyl-2,3-quinoxalinedithiol cyclic carbonate (Morestan) residues in apples and pears. 1476

An improved colorimetric method for determining endosulfan (Thiodan) residues in vegetables and beef fat. 1495

A colorimetric procedure for the microdetermination of sulfonamides in animal tissues. 1502

Colorimetric determination of 2,6-dichloro-4-nitroaniline in plants and soil. 1517

Fungicide residues: colorimetric estimation of dodecylguanidine acetate residues. 1527

Improved colorimetric determination of phorate residues in

COMBUSTION
plant tissues. 1534

Herbicide residues: Colorimetric microdetermination of 1-chloro-2-nitrobenzene in pineapple. 1536

The colorimetric determination and paper chromatography of some aromatic carbamates. 1852

COMBUSTION
A total phosphorus technique for determining organophosphorus pesticide residues using Schoeniger flask combustion. 1435

Simple apparatus for combustion of samples containing C14-labeled pesticides for residue analysis. 1970

COMPETITION
Sexual acceptability of laboratory strains of male house flies in competition with wild strains. 388

COMPOUND VC 1-13
Toxicological studies of compound VC 1-13 in livestock. 1367

CONCAVE GUM (ORANGES)
Cross-protection studies with strains of concave gum and psorosis viruses. 952

CONES
Life history and habits of a midge, Phytophage thujae Hedlin (Diptera: Cecidomyiidae) in western red cedar. 87

CONIDIA
The effect of nutrition on germination of conidia of Helminthosporium sativum in natural soil. 1727

Uptake and innate toxicity of dodine (n-dodecylguanidine acetate) to fungus conidia. 1773

Relationship of lipid contents of fungal conidia to uptake of toxicants. 1774

The relationship of conidial morphology and interspecific fertility in the genus Helminthosporium. 1780

CONIFERAE
Several species of Pholiota associated with root and butt rots of Rocky Mountain conifers. 782

CONNECTICUT
Atractotomus mali and Campylomma verbasci (Heteroptera: miridae) on apples in Conn. 1163

CONODERUS VESPERTINUS
Effects of temperature and moisture on survival of eggs of the tobacco wireworm. 656

CONOTRACHELUS NENUPHAR
Improved methods for mass rearing plum curculio, Conotrachelus nenuphar. 32

A comparative study of certain biological phenomena detected in a parathion-treated strain and a susceptible strain of the plum curculio, Conotrachelus nenuphar. 431

Evaluation of compounds affecting the reproductive potential of the plum curculio. 432

Progress on insecticidal control of apple insects. 1199

Modification of a laboratory rearing method for the plum curculio, Conotrachelus nenuphar. 1925

CONSUMPTION
Quantitive relationship between consumption and excretion of dry matter by larvae of the pale western cutworm, Agrotis orthogonia Morr. (Lepidoptera: Noctuidae). 458

CONTAINERS
Decay of freshly harvested potatoes in air-tight containers. 1374

CONTROL
Spread of boll weevil and its control in far west Texas. 197

CONTROLLED ENVIRONMENT
Mass rearing of the cabbage maggot under controlled environmental conditions, with observations on the biology of Cyclodiene-susceptible and resisting strains. 424

COOLING
Cooling bulk grain in the British climate to control storage insects and to improve keeping quality. 1372

COPPER SULFATE
Effect of copper and glyodin fungicides on amino acid and sugar content and oxygen use of Colletotrichum capsici. 1793

COPULATION
Swarming, mating, and density of Anopheles stephensi mysorensis. 573

CORCHORUS OLITORIUS
Studies on the bionomics of the jute stem girdler, Nupserha bicolor postbrunnea Dutt (Col., Camiidae). 48

CORDIA MACROSTACHYA
The control of black sage (Cordia macrostachya) in Mauritius: the introduction, biology and bionomics of a species of Eurytoma (Hymenoptera, Chalcidoidea). 249

CORKY PIT (PEARS)
Transmissible corky pit of Flemish Beauty pear. 848

CORN
The biology and control of the western bean cutworm in dent corn in Nebraska. 412

Cross-inoculation of tomato and corn with Gibberella. 748

The response of corn to inoculation with Diplodia zeae and Gibberella zeae. 802

Variation in maize seedling blight symptoms with changes in pathogen species, isolate and host genotype. 857

Nature of resistance to Diplodia stalk rot of corn. 928

Adaptation of the corn leaf blight fungus to a resistant and a susceptible corn host. 946

Physiologic specialization in Helminthosporium turcicum. 947

Maize synthetics for disease resistance. 1038

Effects of spider mite infestations on dent corn in California. 1065

Methods of artificial infestation of corn with the earworm, Heliothis zea. 1071

Relationships between plant height and yield of field corn as affected by the European corn borer. 1084

Biology of the pink scavenger caterpillar and its control in corn. 1103

Dispersal of three species of coccinellids in corn fields. 1108

Japanese beetle damage to soybeans and corn. 1121

Granulated insecticides for control of some corn pests. 1129

Insecticidal field screening tests against the fall armyworm in sorghum and corn. 1130

Field infestation of corn in Indiana by the Angoumois grain moth and a rice weevil. 1223

Damage to corn by the pink scavenger caterpillar and its relationship to corn earworm and rice weevil damage. 1243

Detecting corn seedling differences in the greenhouse by visual classification of damage by the fall armyworm. 1268

Influence of various factors on the deterioration of stored corn by fungi. 1375

Effects of temperature, reduced pressure, and moisture content on sorption and retention of ethylene dibromide by wheat and corn. 1398

Dimethoate residues on soybean, corn, and grass forage. 1431

Herbicide uptake and distribution: Synthesis of carbon -14-labeled daiapon and trial applications to soybean and corn plants. 1816

CORN SILKS
Contents of corn silks in relation to corn earworm injury. 1105

Amino acid content of corn silks in relation to resistance to corn earworm. 1186

CORN STEM WEEVIL
Control of a corn stem weevil (Hyperodes humilis), and fall armyworm with DDT and parathion in South Florida. 423

CORSICA
Exocortis in Corsica. 1028

CORYNEBACTERIUM INSIDIOSUM
Pathogenicity and stability of strains of Corynebacterium insidiosum. 808

Rapid screening of alfalfa for resistance to Corynebacterium insidiosum by inoculating petioles. 819

CORYNESPORA
Corynespora blight of sesame. 1006

COSTA RICA
Strains of Pseudomonas solanacearum in indigenous hosts in banana plantations of costa rica, and their relationship to bacterial wilt of bananas. 754

Occurrence of Pseudomonas solanacearum in virgin soils in costa rica. 980

COTTON
Seasonal occurrence of Heliothis larvae on cotton in. 71

A native host plant of the boll weevil and other cotton insects. 131

Methods for determining pink bollworm populations in blooms. 160

Studies on the ability of overwintered boll weevils to find fruiting cotton plants. 172

The relationship of the fruiting of the cotton plant and overwintered boll weevils to the F1 generation. 236

Relationship of predatory and injurious insects in cotton fields in the Salt River Valley area of Arizona. 241

The biology of the boll weevil in relation to cotton type. 297

Relation of gossypol content of cotton plants to insect resistance. 301

Laboratory tests of insecticides against Lygus hesperus on cotton. 302

Susceptibility to acaricides of the mite Tetranychus cinnabarinus infesting cotton in Egypt. 372

Feeding and oviposition reaction of boll weevils to cotton, althea, and okra flower buds. 376

The effects of different plant foods on the fecundity, fertility, and development of a cotton stainer, Dysdercus superstitiosus (F.). 390

Cotton extracts as arrestants and feeding stimulants for the boll weevil. 460

Extraction of a boll weevil attractant from the surrounding growing cotton. 462

Methods of evaluating the chemotropic response of boll weevils to extracts of the cotton plant and various other substances. 546

Field insecticide tests against several cotton pests. 563

Notes on and control of stink bugs affecting cotton in arizona. 670

Comparison of aerial spray and dust insecticide applications for the control of cotton insects in Arizona. 671

Relation of structure to phytotoxicity of s-triazine herbicides on cotton and weeds. 719

Severity, prevalence, and ecology of cotton boll rots as related to temperature. 976

Etiology of wilt in fusarium-infected cotton. 1007

Seed deterioration as a factor in nub-root production in cotton. 1041

Evaluation of cotton strains and progenies for resistance to Verticillium wilt. 1042

Effect of the bollworm, Heliothis zea, on yield and quality of cotton. 1058

Timing of defoliants and desiccants to reduce populations of the pink bollworm in diapause. 1059

Integration of the Heliothis nuclear polyhedrosis virus into a biological control program on cotton. 1061

The effect of spider mite populations on yield and quality of cotton. 1079

Control of several late-season cotton pests in field experiments in 1962. 1089

Control of several cotton pests with systemic insecticides. 1093

Selection in cotton for antibiosis to the boll weevil, Anthonomus grandis. 1102

A new record of a whitefly, Aleurodes spiraeoides Quaintance, infesting cotton, with a note on its parasites. 1119

Seasonal light-trap collections of lepidopterous cotton insects in south Texas. 1120

Relative seasonal abundance of bollworm and tobacco budworm larvae on cotton in Georgia. 1134

Field experiments for control of the boll weevil, bollworm spp., and the cotton aphid on cotton in 1960-62. 1137

The control of yellow tea mite, Hemitarsonemus latus (Banks), with DDT on cotton in Uganda. 1141

The comparative preference of insects for glanded and glandless cottons. 1148

Effect of light and humidity on the absorption and translocation of dimethoate in the cotton plant. 1165

The effect of boll weevil infestations on yield and quality of cotton. 1166

Evaluation of damage to lint and seed of cotton caused by the pink bollworm. 1169

Resistance of experimental cotton strain 1514 to the bollworm and cotton fleahopper. 1170

Carbamate-induced systemic repellency to the boll weevil on cotton. 1178

An arrestant and feeding stimulant for the boll weevil in water extracts of cotton-plant parts. 1180

A boll weevil repellent from the volatile substance of cotton. 1182

Influence of the glandless genes on feeding, oviposition, and development of the boll weevil in the laboratory. 1183

Blister beetles on glandless cotton. 1184

Control of three important cotton insects in the lower Rio Grande Valley in 1960. 1188

Studies of resistance of cotton strains to the boll weevil. 1189

COTTON BOLLS

Attractiveness of isolated groups of cotton plants to migrating boll weevils. 1190

Relationship of Lepidoptera light-trap collections to cotton field infestations. 1200

Insecticide tests against thrips on cotton. 1201

Predicting thrips populations on seedling cotton. 1212

Evaluation of systemic insecticides for cotton insect control. 1219

Hosts plants of the pink bollworm. 1235

Effects of the boll weevil and bollworm on cotton quality. 1255

Influence of thrips on cotton yields in Alabama. 1260

Comparison of insecticide application schedules for control of cotton insects. 1261

Comparative susceptibility of long- and short-staple cotton varieties to bollworm injury in Arizona. 1263

Resistance to the root-knot nematode, Meloidogyne incognita acrita, in upland cotton seedlings. 1280

Preliminary studies with D8CP cotton seed treatment for controlling the root-knot nematode. 1307

Persistence of insecticides in soil and their effects on cotton in Georgia. 1417

Field experiments with insecticides on cotton for control of the boll weevil, bollworm, and cotton leafworm in 1961. 1585

Cotton-plant pigment as a source of resistance to the bollworm and tobacco budworm. 1640

Effects of low dosages of insecticidal seed-treatments on cotton and cotton insects. 1651

Systemic insecticides for control of Lygus hesperus Knight on cotton. 1679

Metabolism of dimethoate in cotton leaves. 1742

The influence of two systemic organophosphates on growth, fruiting, and yield of cotton in California. 1758

Herbicide metabolism:Absorption and metabolism of amino-triazole in cotton. 1772

Fate of 2,2-dichloropropionic acid (dalapon) in the cotton plant. 1794

Effects of certain temperatures and seed treatments on emergence and terminal breakdown of cotton seedlings. 1802

The fate of cyanamide in cotton. 1851

COTTON BOLLS
Winter mortality of boll weevils in cotton bolls in South Carolina. 526

COTTON WHITEFLY
Serious increase of cotton whitefly and virus transmission in Central America. 121

COTTONSEED
Microcoulometric gas chromatographic analysis of grapes and cottonseed for chlorobenzilate residues. 1433

COTTONSEED MEAL
A cottonseed-meal diet for laboratory cultures of the boll weevil. 633

COTTONY SPOT (PEARS)
The spined stink bug: cause of cottony spot in pear in British Columbia. 1266

COULOMETERS
Pesticide residue analysis: Microcoulometric gas chromatography of pesticides. 1580

COUMAPHOS
The reproductive capacity of female Boophilus annulatus collected from cattle dipped in arsenic or coumaphos. 403

Control of cattle grubs with coumaphos applied by sprayer and spray-dip machine. 1339

Co-ral as a litter and nest dust to control the chicken body louse. 1348

Fly control in feces from cattle fed Co-ral. 1360

The effects of coumaphos on poultry and its residues in tissue and eggs. 1687

Insecticide assay: Assay of Co-Ral in technical material and formulated products. 1838

COVER CROPS
Vertical distribution and persistence of insecticidal residues in soils as influenced by mode of application and a cover crop. 1492

CRAMBE
Crambe: susceptibility to some plant viruses. 1797

CRAMBE ABYSSINCA
Crambe: susceptibility to some plant viruses. 1797

CRAMBUS CALIGINOSELLUS
Notes on the ecology and biology of the corn root webworm. 44

CRANBERRY BOGS
Control of Lichnanthe vulpina in cranberry bogs. 1252

CRAYFISH
Some chemical characteristics of a DDT-INDUCED neuroactive substance from cockroaches and crayfish. 1835

CRIBRATE WEEVIL
The cribrate weevil, a new pest of the globe artichoke in California. 863

CRINKLE (PLUMS)
Noninfectious crinkle leaf on santa rosa plum. 1204

CRONARTIUM RIBICOLA
The effect of environment on germination of sporidia in Cronartium ribicola. 740

CROP LOSSES
Losses to winter wheat from infection by septoria tritici. 760

Evaluation of damage to lint and seed of cotton caused by the pink bollworm. 1169

CROP REPORTS
Report and abstracts of the 1959 meeting of the northeastern division of the American Phytopathological Society. 717

CROP RESISTANCE
Methods of artificially infesting corn with the corn earworm and factors influencing resistance. 1151

CROP ROTATION
Evaluation of crops rotation and soil fumigation for controlling the soybean cyst nematode. 1289

CROP YIELDS
Soil indexing for pea root rot and the effect of root rot on yield. 943

The effect of tobacco mosaic virus on tomato yield. 1037

Effect of the bollworm, Heliothis zea, on yield and quality of cotton. 1058

The effect of spider mite populations on yield and quality of cotton. 1079

Further studies of damage to safflower plants by thrips and lygus bugs. 1080

Relationships between plant height and yield of field corn as affected by the European corn borer. 1084

Preliminary studies on the effect of lygus bugs on the set

and yield of tomatoes. 1092

Evaluation of brown wheat mite control on yield of winter wheat in Kansas. 1097

The effect of boll weevil infestations on yield and quality of cotton. 1166

Effect of infestation by the rice stink bug, Oebalus pugnax on yield and quality in rice. 1246

Effects of the boll weevil and bollworm on cotton quality. 1255

Tomato yields and leaf miner infestations and a sequential sampling plan for determining need for control treatments. 1269

Effect of foliage infestation of the english grain aphid on yield of triumph wheat. 1275

The influence of two systemic organophosphates on growth, fruiting, and yield of cotton in California. 1758

CROPS
Dagger nematodes associated with forage crops in New York. 1318

Herbicide uptake from soils: Uptake of radioactive ethyl-N,N-)D1-N-PROPYLTHIO carbamate (EPTC-S35) and translocation of sulfur-35 in various crops. 1409

Herbicide residues: A colorimetric method for the determination of EPTC residues in crops and soils. 1430

Residues of OO-dimethyl S-(N-methylcarbamoylmethyl) phosphorothioiothionate (Dimethoate) in sprayed crops. 1445

Dylox residues on vegetable crops. 1521

Uptake of radioactive fission products by crop plants. 1781

CROSSBREEDING (INSECTS)
Crossbreeding studies with seven species of Trogoderma. 637

CROWN RUST (OATS)
Induced susceptibility of wheat and barley to oat crown and stem rust fungi. 753

Factors affecting germinability of urediospores of Puccinia coronata. 835

Inheritance and linkage studies of a derived Victoria-type crown rust resistance and Victoria blight. 873

Victoria-type resistance to crown rust separated from susceptibility to Helminthosporium blight in oats. 874

Sources of crown rust resistance of oats. 982

Oat varieties with adult plant field resistance to race of crown rust. 264 1012

Altering the effect of oat rust resistant genes by certain physical means. 1729

CRUCIFERAE
Studies of Alternaria spp. pathogenic on Cruciferae. 768

Studies on control of black rot of Crucifers with antibiotics. 859

Resistance of 30 commercial cruciferous varieties to the striped flea beetle, Phyllotreta striolata. 1075

Varietal resistance to insect attack in various cruciferous crops. 1213

CRUCIFERS
The role of the oospores of Peronospora parasitica in downy mildew of crucifers. 888

CUCUMBERS
The banded cucumber beetle and its control. 1272

CUCUMIS MELO
Honey bee visitors and fruit set of cantaloupes. 1185

CUCURBITS
Vegetable diseases in North Carolina during 1958 and 1959. 1046

CULICIDAE
Studies in mosquito repellency. III. flight posture. 386

N-alkyl toluamides in cloth as repellents for mosquitoes, ticks, and chiggers. 394

The role of carriers in the performance of granular formulations of parathion for mosquito control. 538

Metabolism of methaphoxide in mosquitoes, house flies, and mice. 565

Orientation of the males of Aedes aegypti (L.) (Diptera: Culicidae) to sound. 681

The effects of various chemicals on eggs of the yellow-fever mosquito, Aedes aegypti. 1631

Laboratory tests of insecticides on mosquito larvae in polluted and tap water. 1637

An olfactometer for use in the study of mosquito attractants. 1912

CULICOIDES IMPUNCTATUS GOETGHEBUER
The flight of Culicoides impunctatus Goetghebuer (Diptera, Ceratopogonidae) over moorland and its bearing on midge control. 114

CULTURAL CONTROL (INSECTS)
Observations on the biology and cultural-insecticidal control of Prosapia bicincta, a spittlebug, on coastal bermudagrass. 1069

Plowing for sweetclover weevil control. 1175

CULTURAL CONTROL (PLANT DISEASES)
Effect of culture substrate on the virulence of single-basidiospore isolates of Pellicularia filamentosa. 993

CULTURE
Oviposition and fecundity of boll weevils in mass rearing laboratory cultures. 325

CULTURE MEDIA
Mass-rearing of the larvae of nine noctuid species on a simple artificial medium. 213

In vitro establishment and development of Eucosma sp. larvae from cones of Pinus resinosa on an artificial nutrient medium. 286

The use of agar media in transporting and rearing phytoseiid mites. 520

An improved medium for rearing red-banded leaf roller. 580

Two artificial (oligidic) media for the douglas-fir beetle, Dendroctonus pseudotsugae Hopkins (Coleoptera: Scolytidae). 594

A simple artificial rearing medium for the cabbage looper. 606

A cottonseed-meal diet for laboratory cultures of the boll weevil. 633

A comparison of the biology of the sugarcane borer on artificial and natural diets. 686

The influence of pH on growth of Thielaviopsis basicola in culture and the development of Thielaviopsis root rots of poinsetta and bean in soil. 736

Comparison of cultural variants of Alternaria sesame. 743

Growth and sporulation of Guignardia bidwellii in pure culture and in the field. 761

Frozen-lima-bean agar for culture and storage of Phytophthora sojae. 762

CULTURE-INDEXING

Vegetative growth of Phytophthora spp. on differential synthetic media as an aid in separating isolates pathogenic to citrus. 789

Conidial production from filter paper cultures of Helminthosporium vagans and Alternaria solani. 875

Culturing, histopathology, and biochemistry of Ditylenchus dipsaci and Aphelenchoides ritzema-bosi on alfalfa tissues. 1300

Toxin production by Helminthosporium victoriae on synthetic media containing different nitrogen sources. 1725

Some factors affecting sporangium formation of Phytophthora cryptogea. 1753

Superior media for isolation of actinomycetes from soil. 1765

Oospore formation by Aphanomyces euteiches on synthetic media. 1784

Culture media for viability studies and storage of Erwinia amylovora. 1788

Sterilization of agar media with propylene oxide. 1840

CULTURE-INDEXING
Control of vascular wilt diseases of carnation by culture-indexing. 916

CUMENE
Two fungicidally active 5-chloro-4-aryl-1,2-dithiol-3-ones derived from cumene and p-cymene. 1824

CUPRIC SULFATE
Surface sterilization of eggs of the boll weevil with cupric sulfate. 549

CURLY TOP (BEETS)
Curly top prevention by vector control on snap beans grown for seed. 934

CURLY TOP (CANTALOUPES)
Loss caused by late infection of cantaloupes by the curly top virus. 800

CURRANTS
Determination of organic fluorine residues in blackcurrants. 1454

CUSCUTA
Transmission of psorosis virus by dodder. 938

CUTICLE
Review of herbicide penetration through plant surfaces. 1739

CYANAMIDE
The fate of cyanamide in cotton. 1851

CYANIDES
Use of cyanide in pink bollworm sex-lure traps. 1913

CYCLODIENE
Distribution of cyclodiene-insecticide resistance in the seed maggot complex in relation to cropping practices in southwestern Ontario. 84

Mass rearing of the cabbage maggot under controlled environmental conditions, with observations on the biology of Cyclodiene-susceptible and resisting strains. 424

Integrated control of cyclodiene-resistant carrot rust fly. 1111

Evaluation of soil insecticide treatments for control of cyclodiene-resistant southern corn rootworms. 1555

CYLAS FORMICARIUS ELEGANTULUS
Reproductive potential of the sweetpotato weevil after exposure to ionizing radiations. 666

CYNODON DACTYLON
Spring dead spot of bermudagrass. 1031

Observations on the biology and cultural-insecticidal control of Prosapia bicincta, a spittlebug, on coastal bermudagrass. 1069

CYPERUS PAPYRUS
Control of the stem borer Bactra verutana on cyperus papyrus. 1146

CYRTEPISTOMUS CASTANEUS
Occurrence of asiatic oak weevil in alfalfa and red clover in maryland. 101

CYTOGENETICS
Cytological and genetic studies on the effect of Ruelene. 707

CYTOLOGY
Cytological and genetic studies on the effect of Ruelene. 707

Electron microscope study on the cytology of a microsporidian spore by means of ultrathin sectioning. 1930

CYTOSPORA
Occurrence of Cytospora canker in stone fruit trees in California. 876

CYTOSPORA RUBESCENS
Pathogenic variation of Cytospora rubescens isolates on stone fruit varieties. 1017

C14
Absorption and metabolism of C14-labeled DDT by DDT-susceptible and DDT-RESISTANT pink bollworm adults. 314

C14-ENDOSULFAN
Metabolism, storage, and excretion of C14-endosulfan in the mouse. 1586

DACUS CUCURBITAE
Melon fly eradication by overflooding with sterile flies. 625

Artificial egging receptacles for three species of Tephritid flies. 1976

DACUS DORSALIS
Oriental fruit fly eradication by male annihilation. 634

Artificial egging receptacles for three species of Tephritid flies. 1976

DAIRY BARNS
Fly populations in dairy barns.
hansens, e j. 225

DAIRY CATTLE
Study of some mineral mixtures designed for dairy cows. 1324

Oil-based and water-based diodrin sprays for fly control on dairy cattle. 1330

Metabolism of and residues associated with dermal and intramuscular application of radiolabeled Fenthion to dairy cows. 1350

Insecticide residues in milk: Determination of methoxychlor and or metabolites in milk following topical application to dairy cows. 1448

Insecticide residues in milk: The effects of feeding high levels of Sevin on residue, flavor, and odor of the milk of dairy cattle. 1471

Residues of heptachlor epoxide and teiodrin in milk from cows fed at part per billion insecticide levels. 1473

Insecticide residues in milk: Excretion of Co-Ral in the milk of dairy cattle. 1513

The metabolism of Sevin in dairy cows. 1870

DAIRY FARMS
Preventive spraying schedules for dairy farm fly control. 1335

DAIRY PRODUCTS
Rapid cleanup of dairy products for analysis of chlorinated insecticide residue by electron capture gas chromatography. 1490

DALAPON
Herbicide residues in milk:Form and magnitude of 2,2-dichloropropionic acid (dalapon) residues in milk. 1489

Fate of 2,2-dichloropropionic acid (dalapon) in the cotton plant. 1794

DALAPON SODIUM
Herbicide toxicology: Toxicology of dalapon sodium (2,2-dichloropropionic acid, sodium salt). 1670

DATES
Protection of dates from injury caused by the Apache cicada in California. 1106

DATURA STRAMONIUM
Datura stramonium and Chenopodium hybridum as semiquantitative assay hosts for bromegrass mosaic virus. 773

The pseudo-curly top disease in south Florida. 992

DBCP
Preliminary studies with DBCP cotton seed treatment for controlling the root-knot nematode. 1307

DDT
Population dynamics of spider mites influenced by DDT. . 8

Dehydrochlorination and DDT-RESISTANCE in Aedes aegypti. 261

DDT resistance in honey bees. 271

Resistance to DDT in the adult codling moth and reference curves for guthion and carbaryl. 282

Resistance to DDT in Heliothis virescens. 307

DDT resistance in Heliothis zea. 309

Carbaryl, phosphamidon, and DDT tests on the western hemlock looper in Washington. 313

Absorption and metabolism of C14-labeled DDT by DDT-susceptible and DDT-RESISTANT pink bollworm adults. 314

Pink bollworm resistance to DDT in the Laguna area of Mexico. 330

Inheritance of resistance to DDT in Blatteila germanica. 336

Control of a corn stem weevil (Hyperodes humilis), and fall armyworm with DDT and parathion in South Florida. 423

The mechanism of DDT resistance in the spotted root maggot Euxesta notata. 443

Rate of increase in resistance to DDT in pink bollworm adults. 500

Investigations of pink bollworm resistance to DDT in Mexico and the United States. 501

Field tests of dichlorvos, General Chemical 4072, Hooker Compound, and synergized dDT against Musca domestica. 515

Separation and purification of DDT -degrading enzymes from the human body louse. 524

The enzymatic in vitro degradation of DDT by susceptible and DDT - resistant body lice. 560

The effects of DDT and sublethal doses of dicofol on reproduction of the two-spotted spider mite. 578

DDT susceptibility of Drosophila melanogaster in relation to dietary amino nitrogen. 588

A comparison of chemoreceptor and whole-fly responses to DDT and parathion. 620

A genetic factor controlling color and its association with dDT sensitivity in the cabbage looper. 705

Seed treatment with phorate, disulfoton, and other insecticides to control pea insects in Iraq. 1060

Early-season application of DDT for pink bollworm control. 1082

The control of yellow tea mite, Hemitarsonemus latus (Banks), with DDT on cotton in Uganda. 1141

The influence of spray programs on the fauna of apple orchards in Nova Scotia. XI. effects of low dosages of DDT on predator populations. 1168

Some effects of DDT on Pulvinaria vitis (L.) (Homoptera: Coccidae) infesting peach in Ontario. 1202

Insecticide residues: Procedure for clean up of plant extracts prior to analyses for DDT and related pesticides. 1425

Translocation of DDT and heptachlor in soybeans. 1453

DDT residues on sweet corn ear tips and silks after treatment with dust, spray, or granular formulations. 1475

DDT- METABOLISM and excretion in Coleomegilla maculata De Geer. 1544

Storage and excretion of DDT in starved rats. 1582

Concentration of DDT in brain and other tissues in relation to symptomatology. 1611

Effects of DDT, as used in black fly larval control, on stream arthropods. 1626

Laboratory study on the contact toxicity of DDT to Ectropis crepuscularia Schiff. 1674

Penetration and metabolism of DDT in resistant and susceptible house flies and the effect on latent toxicity. 1684

Codistillation of DDT with water. 1806

Specificity of diarylhaloethane-dehydrohalogenase of susceptible and DDT-RESISTANT house flies. 1812

Insecticide solubility: Solubility of carbon-14 DDT in water. 1817

The estimation of mixtures of DDT and BHC isomers using infrared differential null-analysis. 1821

The synthesis of tertiary carbon deuterated DDT and DDT analogs. 1823

Some chemical characteristics of a DDT-INDUCED neuroactive substance from cockroaches and crayfish. 1835

Effects of some spray adjuvants on dDT emulsifiable concentrate. 1839

Simultaneous quantitative determination of lindane and DDT gas chromatography. 1841

Petroleum fractions as DDT solvents. 1866

An effect of electrostatic dusting on DDT dust deposition. 1921

DEAD BUTTON
Dead button, a non-transmissible disorder of late Montmorency cherry. 1030

DECIDUOUS TREE FRUITS
Relative infection potentials of rootstock and scion in increasing virus incidence in the deciduous tree fruit nursery. 813

DEFOLIANTS
Timing of defoliants and desiccants to reduce populations of the pink bollworm in diapause. 1059

DEFOLIATION
Effects of defoliation on survival of larvae of the larch sawfly Prisitiphora erichsonii (Htg.). 103

Outbreaks of the forest tent caterpillar, Malacosoma disstria Hbn., a periodic defoliator of broad-leaved trees in Ontario. 214

Experimental field techniques used to evaluate gypsy moth,

DEHYDROACETIC ACID

porthetria dispar, control in new york. 339

DEHYDROACETIC ACID
The metabolism of dehydroacetic acid (DHA). . I810

DEHYDROCHLORINATION
Dehydrochlorination and DDT-RESISTANCE in Aedes aegypti. 261

DEIGHTONIELLA TORULOSA (SYD.) ELL.
Banana fruit-spot caused by Deightoniella torulosa (Syd.) Ell. 891

DEMETON
Phorate and demeton for control of the pea leaf miner on sugarbeets. 1383

Isotope-labeled insecticides:Preparation of labeled 2-ethylthioethanol, a demeton intermediate. I834

DEMOGRAPHY
Population dynamics of Leptinotarsa decemlineata (Say) in eastern Ontario II. Population and mortality estimation during six age intervals. 80

The spatial distribution of two pine sawflies and methods of sampling for the study of population dynamics. I33

DENDROCTONUS BREVICOMIS
A comparison of radiograph analysis and bark dissection in estimating numbers of western pine beetle. 43

DENDROCTONUS FRONTALIS
Methods of sexing and sex ratios of the southern pine beetle, Dendroctonus frontalis Zimm. 169

The clerid beetle, Thanasimus dubius, as a predator of the southern pine beetle. 224

Benzene hexachloride emulsion as a summer control of the southern pine beetle. I551

DENDROCTONUS PONDEROSAE
Biology of mountain pine beetle, Dendroctonus monticulae Hopkins, in the East Kootenay Region of British Columbia.I. Life cycle, brood development, and flight periods. 582

Biology of the mountain pine beetle, Dendroctonus monticolae Hopkins, in the East Kootenay region of British Columbia II. Behaviour in the host, fecundity, and internal changes in the female. 583

DENDROCTONUS PSEUDOTSUGAE
A contribution to the knowledge of flight muscle changes in the Scolytidae (Coleoptera). 7

Infestation patterns of Douglas-fir beetle in standing and windthrown trees in southern Idaho. 63

A method to determine progressive mortality during seasonal development of Douglas-fir beetle brood. 64

Two artificial (oligidic) media for the douglas-fir beetle, Dendroctonus pseudotsugae Hopkins (Coleoptera: Scolytidae). 594

An instance of delayed emergence of the Douglas-fir beetle and its effect on an infestation in southern Utah. 1117

DENSITY
Density dependence in population fluctuations. 1980

DENT CORN
Losses caused by the Angoumis grain moth in dent corn. 1191

DEOXYRIBONUCLEIC ACID
DNA content of Prunus leaf tissue. I728

DEPOSITS
The dye-tracer methods measuring aerial spray deposits in forest insect research. 1990

DESTRUCTIVE PRUNE WORM
Bionomics of the destructive prune worm, Mineola scitulella, on sour cherry in Wisconsin. 163

DETERGENTS
Effects of salts, detergent, and a barley-juice factor on stability of barley stripe mosaic virus. 750

DEUTERIUM
The synthesis of tertiary carbon deuterated DDT and DDT analogs. . 1823

DEVELOPMENT
Influence of the glandless genes on feeding, oviposition, and development of the boll weevil in the laboratory. 1183

DI-SYSTON
Germination of alfafa seed treated with dry and liquid formulations of di-syston and phorate. I222

DIABROTICA
Apparatus and procedure for separation of corn rootworm eggs from soil. 1891

DIABROTICA BALTEATA
Studies of sex attractant of banded cucumber beetle. 349

Biology of the banded cucumber beetle, Diabrotica balteata, in Louisiana. 1205

The banded cucumber beetle and its control. 1272

DIABROTICA LONGICORNIS
Survival of northern corn rootworm eggs through one and two winters. 332

The effect of physio-chemical treatments on diapausing eggs of northern corn rootworms, Diabrotica longicornis. 348

Northern corn rootworm resistance in sweet corn. 1259

DIABROTICA UNDECIMPUNCTATA HOWARDI
Mass rearing of the western spotted cucumber beetle. 194

Evaluation of soil insecticide treatments for control of cyclodiene-resistant southern corn rootworms. 1555

Observations on the biology of the southern corn rootworm and insecticidal tests for its control on peanuts in Georgia. 1612

DIABROTICA VIRGIFERA
Insecticide resistance in the adult western corn rootworm in Nebraska. 276

Immature stages of western corn rootworm. 391

DIALYSIS
Toxicity of the dialyzable fraction of the venom of the yellow scorpion, Leirus quinquestriatus, to the migratory locust. I632

DIANTHUS CARYOPHYLLUS
Influence of nitrogen and potassium nutrition levels on the development of Fusarium systemic wilt of carnations. 811

Control of vascular wilt diseases of carnation by culture-indexing. 916

Control of thrips and aphids on carnations with systemic insecticides. 1627

DIAPAUSE
A field study of diapause, diapause control, and population dynamics of the boll weevil. 129

A pre-diapause arrested development period in the red-banded leaf roller, Argyrotaenia velutinana. 398

Diapause in eggs of the pale western cutworm Agrotis orthogonia Morr. (Lepidoptera: Noctuidae). 451

The reproduction-diapause approach to population control of the boll weevil. 497

Starvation method for obtaining diapausing boll weevils able to survive the winter in hibernation. 657

Timing of defoliants and desiccants to reduce populations of the pink bollworm in diapause. 1059

A microchamber for replicating photophases in diapause studies with the european corn borer. I973

DIAPAUSE CONTROL
A large-scale field evaluation of boll weevil diapause control in Mississippi. 522

DIARYLHALOETHANE-DEHYDROHALOGENASE
Specificity of diarylhaloethane-dehydrohalogenase of susceptible and DDT-RESISTANT house flies. 1812

DIATOMACEOUS EARTH
Diatomaceous earth tested against spruce budworm. 631

DIATRAEA SACCHARALIS
Goniozus indicus as a parasite of the sugarcane borer. 395

A comparison of the biology of the sugarcane borer on artificial and natural diets. 686

Sugarcane borer resistance to insecticides. 693

Effect of Trichogramma releases on parasitism of sugarcane borer eggs. 1077

Critical period for controlling the sugarcane borer in sugarcane in Louisiana. 1167

DICHLORVOS
Field tests of dichlorvos, General Chemical 4072, Hooker Compound, and synergized dDT against Musca domestica. 515

Seed treatment with phorate, disulfoton, and other insecticides to control pea insects in Iraq. 1060

Control of the tobacco moth with dichlorvos. 1395

Sheep bot fly control tests with DDVP. . 1672

Tests with dichlorvos vapors for the control of mushroom flies. 1696

DICOFOL
The effects of DDT and sublethal doses of dicofol on reproduction of the two-spotted spider mite. 578

Acaricide residues:A modification of the Rosenthal method for rapid determination of Kelthane residues. 1462

Effect of pre- and post-treatment temperatures, age of deposit, and repellency on the toxicity of Kelthane to the two-spotted mite, Tetranychus telarius (L.) (Acarina: Tetranychidae). 1596

Acaricidal properties of Aramite and Kelthane against two strains of two-spotted spider mite. 1693

DIEBACK (ORNAMENTAL JUNIPER)
Periploca nigra, a major cause of dieback of ornamental juniper in California. 120

DIET
Adult boll weevils and eggs marked with dye fed in larval diet. 66

Failure of myo-inositol to prevent the growth-inhibiting effects of lindane in Periplaneta americana. 383

The effects of various larval and adult diets on the fecundity and longevity of the bollworm, tobacco budworm, and cotton leafworm. 503

Artificial diets for the apple maggot, Rhagoletis pomonella. I. Mass rearing on certain diets. 548

DDT susceptibility of Drosophila melanogaster in relation to dietary amino nitrogen. 588

Rearing of the bollworm on artificial diet. 660

A comparison of the biology of the sugarcane borer on artificial and natural diets. 686

Supplementation of chick diets with vitamin E to improve meat quality. 1323

DIETHYL NITRONAPHTHYL PHOSPHATES
Insecticidal properties of some diethyl nitronaphthyl phosphates. 1832

DIFFERENTIAL NULL-ANALYSIS
The estimation of mixtures of DDT and BHC isomers using infrared differential null-analysis. 1821

DIGITARIA DECUMBENS
Insecticide residues: Toxaphene residues on pangolagrass. 1533

DIMEFOX
The concentration of dimefox in air resulting from its use on hops. 1415

DIMETHOATE
Studies of dimethoate for control of California red scale. 343

Polymerization as a means of prolonging effectiveness of orally administered systematic insecticides. 521

The penetration and metabolism of H-Dimethoate in insects. 658

Effect of light and humidity on the absorption and translocation of dimethoate in the cotton plant. 1165

Gas chromatographic and colorimetric measurement of dimethoate residues. 1421

Dimethoate residues on soybean, corn, and grass forage. 1431

Residues of OO-dimethyl S-(N-methylcarbamoylmethyl) phosphorothiolothionate (Dimethoate) in sprayed crops. 1445

Insecticide residues: Persistance of dimethoate and metabolites following foliar application to plants. 1451

Colorimetric method for the estimation of dimethoate residues. 1463

Dimethoate residues in leafy crops. 1507

Persistance of dimethoate residues in hemlock treated for hemlock florinia scale as determined by oxygen flask combustion. 1525

Biological and chemical properties of dimethoate and related derivatives. 1556

Metabolism of dimethoate in cotton leaves. 1742

The metabolism of dimethoate by vertebrate tissues. 1867

DIMETHYL PHOSPHATE
Insecticide toxicity: Preparation and biological activity of a series of halogenated ethyl and vinyl dimethyl phosphate esters. 1846

DIORYCTRIA ZIMMERMANI
Zimmerman pine moth biology and control. 320

DIOXATHION
Acute toxicity of Delnav and its residues in tissues of livestock. 1481

Toxicologic investigations of Delnav. 1599

DIPHENYLAMINE
Rapid determination of diphenylamine in apples by direct bromination and gas chromatography. 1469

Insecticide measurement: Determination of toxaphene by a spectrophotometric diphenylamine procedure. 1833

DIPLODIA ZEAE
The response of corn to inoculation with Diplodia zeae and Gibberella zeae. 802

Nature of resistance to Diplodia stalk rot of corn. 928

DIPLOID
The diploid nucleus of Puccinia carthami in unstained water mounts. 1770

DIPPING
Tolerance of imported garlic bulbs to methyl bromide fumigation and hot-water dips. 1396

Effectiveness of chemical dip treatments on the culture of

DIPRION SIMILIS

Croft lilies. 1741

DIPRION SIMILIS
Collection of additional sex attractant from the virgin female introduced pine sawfly. 456

DIPRIONIDAE
Some biological attributes of sawflies in the Neodiprion fulviceps complex in a brushfield pine plantation (Hymenoptera: Diprionidae). 41

Pine sawfly larvae, Neodiprion excitans, survive subfreezing temperatures in Florida. 378

DIPTERA
The influence of parathion and para-oxon on sensory hairs of flies. 490

Seasonal distribution of drosophilid flies in Beltsville, Maryland, tomato fields. 1262

Species of Hippelates (Diptera: Chloropidae) gnats collected from mammals. 1346

Fly control in feces from cattle fed Co-ral. 1360

Field evaluation of organophosphate insecticides as soil treatments for the control of Hippelates gnats. 1656

A portable apparatus for separating fly larvae from poultry droppings. 1881

DIPYRIDYL
Mode of action of dipyridyl quaternary salts as herbicides. 1620

DISPERSION AGENTS
Some new infestations of the balsam woolly aphid in North Carolina, with possible modes of dispersal. 1063

DISSECTION
Mechanical excision of the retrocerebral complex from frozen cockroach heads. 311

The determination of Fall Armyworm parasitism by dissection. 318

A method of repointing insect dissecting forceps. 1889

DISTILLATION
Fungicide residues:A modified Gibbs method for the determination of 1 p.p.m. or less of o-phenylphenol in fruits. 1491

Codistillation of DDT with water. 1806

DISULFOTON
Apparent increase in populations of the strawberry aphid caused by phorate and disulfoton. 603

Experimental control of phony peach virus vectors with Di-syston. 847

Seed treatment with phorate, disulfoton, and other insecticides to control pea insects in Iraq. 1060

Controlling hessian fly with phorate and disulfoton. 1072

Granular phorate and Di-Syston for control of aphids on field-grown Easter lily. 1100

Effectiveness of insecticides against the sorghum webworm in sorghum heads. 1613

DITHIOCARBAMATES
An acid method for the volumetric estimation of water-soluble dithiocarbamates. 1858

DITHIOCARBAMIC ACID
Comparative fungitoxicity of some mono- and dialkyl-substituted dithiocarbamate vapors and solutions. 1751

DITYLENCHUS DIPSACI
Hydrolytic and respiratory enzymes of species of Ditylenchus and Pratylenchus. 1299

Culturing, histopathology, and biochemistry of Ditylenchus dipsaci and Aphelencholdes ritzema-bosi on alfalfa tissues. 1300

Extraction of Ditylenchus dipsaci from organic soil and dried onion scales. 1302

DITYLENCHUS TRIFORMIS
Hydrolytic and respiratory enzymes of species of Ditylenchus and Pratylenchus. 1299

DIURNAL FEEDING
The diurnal feeding activity of Glossina palpalis palpalis Aust. in relation to trypanosome challence. 488

DIURNAL RHYTHM
Daily rhythm of oviposition in the two-spotted spider mite. 568

DOCKAGE
Preference of Tribolium castaneum for wheat containing various percentages of dockage. 1393

DODECYL BENZENE SODIUM SULFONATE
Chronic toxicity of Santomerse no.3 from Olefin (dodecyl benzene sodium sulfonate). 1669

DODECYLGUANIDINE ACETATE
Fungicide residues: colorimetric estimation of dodecylguanidine acetate residues. 1527

DODINE
Uptake and innate toxicity of dodine (n-dodecylguanidine acetate) to fungus conidia. 1773

DOGS
The ear mite, Otodectes cynotis, in dogs: a report of two surveys. 1361

A one-year study of the toxicity of ethambutol in dogs: results of gross and histopathologic examinations. 1564

Synergism among oral carcinogens II. Results of the simultaneous feeding of bladder carcinogens to dogs. 1587

Food additives, safety: Effect of feeding butylated hydroxyanisole to dogs. 1711

DOGWOOD FLEA-BEETLE
Parasitism of the dogwood flea-beetle, Altica corni, in Ontario. 130

DOLLAR SPOT (GRASSES)
Broad spectrum fungicides tested for control of melting-out of Kentucky bluegrass and Sclerotinia dollar spot of Seaside bentgrass. 779

DOMESTIC MANURES
Olfactory and oviposition responses of the house fly to domestic manures, with notes on an autogenous strain. 486

DOMINANCE
Temperature effecting a reversal of dominance in the resistance of Pisum sativum to bean virus 2. 977

DOORS
An insect-proof doorway. 1928

DOSAGE
Dosages of nuclear-polyhedrosis virus effective against Malacosoma disstria with notes on interspecies susceptibility. 483

Dosage-time relationships between 80:20 (CCL4: CS2) and adult rice weevils, Sitophilus oryzae. 1389

Effects of low dosages of insecticidal seed-treatments on cotton and cotton insects. 1651

DOUGLAS-FIR CONE MIDGE
Helicopter application of guthion for the control of the douglas-fir cone midge. 1150

Tests of guthion for the control of the Douglas-fir cone midge. 1629

DOUGLAS-FIR ENGRAVER
The life history and habits of Scolytus unispinosus Leconte (Coleoptera: Scolytidae) in the interior of british Columbia. 148

DOW M-1816
Horn fly and face fly control studies with Dow M-1816. . 1634

DOWNY MILDEW (BROCCOLI)
The role of the oospores of Peronospora parasitica in downy mildew of crucifers. 888

DOWNY MILDEW (CABBAGE)
The role of the oospores of Peronospora parasitica in downy mildew of crucifers. 888

DOWNY MILDEW (CAULIFLOWER)
The role of the oospores of Peronospora parasitica in downy mildew of crucifers. 888

DPPD
Determination of NN-diphenyl-p-phenylenediamine (DPPD) in fat and other biological materials. 1441

DRACAENA SANDERIANA
Stem rot of Dracaena sanderiana. 911

DRAWING
A new drawing aid. 1978

DRI-DIE 67
Laboratory studies of the effect of Dri-Die 67 on the tatus. 586

DROSOPHILA
Vaporized Dibrom for control of Drosophila in lemon storage houses. 1387

DROSOPHILIDAE
Seasonal distribution of drosophilid flies in Beltsville, Maryland, tomato fields. 1262

DRUG RESIDUES
Determination of furaltadone in milk. 1449

A colorimetric procedure for the microdetermination of sulfonamides in animal tissues. 1502

Determination of trace amounts of nitrofurazone in milk. 1529

DRUGS
The rationale for medicated feeds. 1472

DUSTING
Laboratory studies of the effect of Dri-Die 67 on the tatus. 586

Insecticide deposits from dusts or sprays applied by aircraft to flue-cured tobacco. 1177

Insecticide and microbial dusts and application intervals for control of lettuce insects. 1231

Co-ral as a litter and nest dust to control the chicken body louse. 1348

Further tests with power dusting to control the sheep ked. 1353

Residues of Sevin in whole milk from sprayed and dusted cows. 1455

DDT residues on sweet corn ear tips and silks after treatment with dust, spray, or granular formulations. 1475

Micronized insecticidal dusts for aircraft disinsectization. 1699

Dusting stations and cable backrubbers as self-applicatory devices for control of the face fly. 1915

DUSTING EQUIPMENT
An easily constructed vacuum duster. 1901

DWARF BEANS
Use of gibberellic acid in facilitating the mechanical harvesting of dwarf beans. 1734

DYES
Adult boll weevils and eggs marked with dye fed in larval diet. 66

Seed disinfection: Fungicide and dye distribution in liquid seed treatment. 1763

The dye-tracer methods measuring aerial spray deposits in forest insect research. 1990

Tests for selecting tracer dyes for aerial sprays. 1991

EAR MITE
The ear mite, Otodectes cynotis, in dogs: a report of two surveys. 1361

EARLINESS (PRUNES)
Virus infection not the cause of earliness in three strains of italian prune. 871

EARTHWORMS
Effects of certain insecticides on earthworms. 1589

EAST AFRICA
Rearing Pseudotheraptus wayi Brown (Coreidae) a pest of coconuts in East Africa, evaluations of its susceptibility to various insecticides. 674

EASTERN UNITED STATES
Studies on the feeding behavior of alfalfa weevil adults from the eastern and western united states. 119

EASTERN UNITED STATES
Status of the alfalfa weevil biological control program in the eastern United States. 34

ECOLOGY
An ecological study of arthropod populations on apple in northeastern Wisconsin: species affecting the fruit. 165

Bionomics of the bark beetle Pseudopityophthorus pruinosus with special reference to its role as a vector of oak wilt, Ceratocystis fagacearum. 188

Ecological and nutritional studies on Coleomegilla maculata DeGeer (Coleoptera: Coccinellidae). II. The effects of different population densities and sex ratios on oviposition. 270

EGG PARASITE
Observations on the life history of Telenomus alsophilae, an egg parasite of the elm spanworm, Ennomos subsignarius. 30

EGG YOLKS
Lindane and BHC in egg yolks following recommended uses for louse and mite control. 1364

Determination of NN-diphenyl-p-phenylenediamine (DPPD) in fat and other biological materials. 1441

EGGPLANT
Increase in the incidence of Verticillium wilt of eggplant in the presence of Pratylenchus penetrans. 903

Resistance to bacterial wilt in eggplant in North Carolina. 1047

EGGS
A critical appraisal of grasshopper forecast maps in Saskatcewan, 1936-1958. 51

Occurrence of the egg parasite Closterocerus cinctipennis in Virginia. 153

Influence of cold storage on the viability of alfalfa weevil eggs and feeding ability of hatching larvae. 341

Insect chemosterilants: incorporation of 5-fluorouracil into house fly eggs. 469

Life history and behaviour of Scelio calopteni Riley (Hymenoptera: Scelionidae), a parasite of grasshopper eggs. 564

The biology and behaviour of the European pine shoot moth Rhyacionia buoliana (Schiff.), in southern Ontario. II. Eggs, larva, and pupa. 567

Technique for mass rearing of the pink bollworm by infesting diet medium with eggs. 584

Overwintering in the egg stage by the spotted alfalfa aphid in Nebraska. 704

ELASMOPALPUS LIGNOSELLUS

Egg deposition by boll weevils isolated from males during hibernation period and after spring emergence. 708

Determination of Sevin insecticide and its metabolites in poultry tissues and eggs. 1482

Methoxychlor in eggs and chicken tissues. 1508

The effects of coumaphos on poultry and its residues in tissue and eggs. 1687

Apparatus and procedure for separation of corn rootworm eggs from soil. 1891

Rubber-bulb aspirators to handle minute insects. 1934

ELASMOPALPUS LIGNOSELLUS
Observations on the life history of the lesser cornstalk borer. 47

Biology of the lesser cornstalk borer in south Georgia. 126

Parasites of the lesser cornstalk borer. 491

ELATERIDAE
Adult Elateridae of southern Alberta, Saskatchewan and Manitoba (Coleoptera). 14

A method of rearing southern potato wireworm. 40

ELECTRIC CONDUCTIVITY
Effect of soft rot bacteria and pectolytic enzymes on electrical conductance of witloof chicory tissue. 806

ELECTRIC SWITCHES
Use of step-on switches for control of automatic sprayers. 1879

ELECTRON AFFINITY
The electron affinity detector in pesticide residue analysis. 1468

ELECTRON MICROSCOPES
Electron microscope study on the cytology of a microsporidian spore by means of ultrathin sectioning. 1930

ELECTRON MICROSCOPY
Purification by density-gradient centrifugation, electron microscopy, and properties of Cymbidium mosaic virus. 777

Morphological differentiation of spherical viruses by electron microscopy. 1004

ELECTROPHYSIOLOGY
Monitoring electrophysiological responses of cockroaches for space research. 638

ELECTROSTATIC DUSTING
An effect of electrostatic dusting on DDT dust deposition. 1921

EMBRYOGENESIS
Effects of cold storage on egg viability of the cabbage looper and some aspects of the biology of the progeny survivors. 475

EMERGENCE
Diel periodicities of emergence and oviposition in riverine Trichoptera. 37

Observations on emergence and life-span of wheat bulb fly, Leptohylemyia coarctata (Fall.) ditions. 361

EMERGENCY RHYTHM
Studies on sod webworms. I. Emergence rhythm, mating, and oviposition behavior under natural conditions. 279

EMPOASCA FABAE
Elm spanworm head capsule widths and instars. 46

Some environmental factors influencing oviposition by the potato leafhopper, Empoasca fabae. 467

Population counts vs. nymphs per gram of plant material in determining degree of alfalfa resistance on the potato leafhopper. 1145

Damage to sweetclover varieties by potato leafhopper. 1176

Factors affecting resistance of selected alfalfa clones to the potato leafhopper. 1194

Variation in susceptibility of soybean pubescent types, broad bean, and runner bean varieties and plant introductions to the potato leafhopper. 1271

EMPUSA APHIDIS HOFFMAN
The fungus Empusa aphidis Hoffman parasitic on the wooly pine needle aphid, Schizolachnus pini-radiatae (Davidson). 411

EMULSIFYING AGENTS
Effects of some spray adjuvants on dDT emulsifiable concentrate. 1839

EMULSIONS
Hydroxy Lecithin emulsions for treating insects. 499

Laboratory trials of six polybutene emulsions against the two-spotted spider mite. 1617

ENATION MOSAIC (PEAS)
Some effects of temperature on the transmission of pea enation mosaic virus and on the biology of the pea aphid vector. 1009

ENCAPSULATION
Encapsulation as a technique for formulating microbial and chemical insecticides. 1676

ENDIVE
Effect of soft rot bacteria and pectolytic enzymes on electrical conductance of witloof chicory tissue. 806

ENDOSAN
Seed treatment with phorate, disulfoton, and other insecticides to control pea insects in Iraq. 1060

ENDOSULFAN
Seed treatment with phorate, disulfoton, and other insecticides to control pea insects in Iraq. 1060

Endosulfan, oxydemetonmethyl, and endrin in control of the green peach aphid and suppression of leaf roll in potatoes in eastern Washington. 1207

The control of the pear leaf blister mite with endosulfan. 1215

Tests with endosulfan to prevent borer damage to unseasoned pine logs. 1380

Residues of endosulfan in meat and milk of cattle fed treated forages. 1432

Thiodan and Telodrin residues on tobacco. 1470

An improved colorimetric method for determining endosulfan (Thiodan) residues in vegetables and beef fat. 1495

Insectide residues: Residue analysis of a chlorinated insecticide (Thiodan) by combination of gas chromatography and infrared spectrophotometry. 1538

Studies of endosulfan in bean plants by paper and gas chromatography. 1796

ENNOMOS SUBSIGNARIUS
Observations on the life history of Telenomus alsophilae, an egg parasite of the elm spanworm, Ennomos subsignarius. 30

The effects of the feeding of the potato leafhopper on photosynthesis and respiration in the potato plant. 1757

ENTOMOGENOUS FUNGI
An entomogenous fungus observed attacking alfalfa weevil adults in New York. 340

ENTOMOPHTHORA GRYLLI FRES.
The fungous disease caused by Entomophthora gryili Fres., and its effects on grasshopper populations in Saskatchewan in 1963. 175

ENTOMOPHTHORACEAE
The effect of temperature on some entomophthoraceous fungi. 826

ENTOMOPHTHORACEOUS FUNGI
Entomophthoraceous fungi attacking the potato aphid in northeastern Maine in 1960. 983

ENVIRONMENT
Seasonal abundance of the screw-worm in northern mexico. 91

The influence of certain biological and environmental factors on insecticide tolerance of the lygus bug, Lygus hesperus. 274

Survival of northern corn rootworm eggs through one and two winters. 332

Pine sawfly larvae, Neodiprion excitans, survive subfreezing temperatures in Florida. 37B

Low winter temperatures and the European pine shoot moth, Rhyacionia buoliana (Schiff.) in Ontario. 407

Some environmental factors influencing oviposition by the potato leafhopper, Empoasca fabae. 467

The effect of air and ground surface temperature on boll weevil winter survival. 615

The effect of environment on germination of sporidia in Cronartium ribicola. 740

The effects of environmental conditions on the growth of Merulius lacrymans. 7B7

Wheat bunt development in relation to postinfection environment. 941

Effect of environmental factors on phosphamidon degradation. 1500

ENVIRONMENTAL EFFECTS
Effects of the fall environment of the boll weevil in northeast Mississippi. 85

ENZYMES
The occurrence of a variety of enzymes hydrolyzing cell wall polysaccharides in apples rotted by Botryosphaeria ribis. 883

Recovery of nematodes from infected roots by enzyme preparations. 12BB

Hydrolytic and respiratory enzymes of species of Ditylenchus and Pratylenchus. 1299

Enzyme inhibition: The trypsin inhibitor of alfalfa. 17B7

EPHESTIA ELUTELLA
Control of the tobacco moth with dichlorvos. 1395

EPIDEMIOLOGY
The role of alternate plant hosts in the aphid transmission of bean mosaics in central Washington. 948

EPILACHNA VARIVESTIS
Varietal resistance of beans to the Mexican bean beetle. 107B

Chemical factors influencing host selection by the Mexican bean beetle Epilachna varivestis Muls. 1159

Laboratory tests with Bidrin insecticide. 1578

EPITRIX HIRTIPENNIS
Insecticides for tobacco flea beetle control on cigar-wrapper tobacco. 1247

EPIZOOTIC DISEASES
The epizootiology of European foulbrood of the larval honey bee, Apis mellifera Linnaeus. 275

EPTC
Herbicide uptake from soils: Uptake of radioactive ethyl-N,N-)DI-N-PROPYLTHIO carbamate (EPTC-S35) and translocation of sulfur-35 in various crops. 1409

Herbicide residues: A colorimetric method for the determination of EPTC residues in crops and soils. 1430

Herbicide residues: Improved extraction procedure for the determination of EPTC residues in potatoes. 1467

Herbicide residues:The determination of ethyl N,N-di-n-propylthiolcarbamate (EPTC) in soil by gas chromatography. 147B

EQUIPMENT
A method and machine for detecting living internal insect infestation in wheat. 1096

A vehicle-mountable rotary-tube sprayer. 1B75

A small cage for the collection of insect excreta. 1914

Precision equipment for applying granular formulations in insecticide tests. 1926

Rubber-bulb aspirators to handle minute insects. 1934

Equipment for checking fumigation effectiveness in silo bins* 1937

ERIOPHYES PYRI
The control of the pear leaf blister mite with endosulfan. 1215

ERWINIA AMYLOVORA
Culture media for viability studies and storage of Erwinia amylovora. 178B

ERWINIA CAROTOVORA
Recovery of nematodes from infected roots by enzyme preparations. 12BB

ERWINIA TRACHEIPHILA
Some observations on Erwinia tracheiphila, the causal agent of the cucurbit wilt. 755

ERYSIPHE GRAMINIS F. SP. HORDEI
Genetics of the allelic series at the MI)A locus in barley and cultures of Erysiphe graminis f. sp. hordei that differentiate these alleles. 900

Inheritance of 5 genes conditioning pathogenicity in Erysiphe graminis f. sp. hordei on barley. 901

Genes conditioning pathogenicity in Erysiphe graminis f. sp. hordei on barley variety Atlas 46. 902

ERYTHRONEURA COMES
Laboratory tests with Bidrin insecticide. 157B

ESSENTIAL OILS
Systemic fungicides:The translocation and persistence of tritium-labeled cycloheximide in eastern white pine seedlings. 1759

ESTERASES
Specificity of carbamate induced esterase inhibition in mice. 1547

ESTERS
Tert-butyl and tert-pentyl esters of 6-methyl-3-cyclohexene-1-carboxylic acid as attractants for the Mediterranean fruit fly. 296

Toxicologic studies on pyrethrin-type esters of chrysanthemumic acid. I. Chrysanthemumic acid, 6-chloropiperonyl ester (Barthrin). 1540

Esters produced by endoconidial-forming fungi. 1733

ESTIGMENE ACREA
Bioassay of Bacillus thuringiensis-based microbial insecticides. III. Continuous propagation of the salt-marsh caterpillar, Estigmene acrea. 367

ETCH (TOBACCO)
Pathological histology of Tabasco pepper plants infected with tobacco etch virus. 1039

ETHAMBUTOL
A one-year study of the toxicity of ethambutol in dogs: results of gross and histopathologic examinations. 1564

ETHION

ETHION
Colorimetric method for the determination of ethion of residues. 1466

Isotope-labeled insecticides:Ethion-P32-2. 1827

ETHIOPIA
The world Rhyparochrominae (Hemiptera: Lygaeidae) III. New Rhyparochrominae from the Ethiopian region. 208

ETHOXYQUIN
Determination of butylated hydroxyanisole, butylated hydroxytoluene, and ethoxyquin in hydrocarbon-soluble samples. 1807

ETHYL ESTERS
Insecticide toxicity: Preparation and biological activity of a series of halogenated ethyl and vinyl dimethyl phosphate esters. 1846

ETHYLENE
Growth inhibition of the house cricket with ethylene. 371

ETHYLENE DIBROMIDE
The absorption of 1,2-dibromoethane by oranges and by materials used in their fumigation. 1085

Bulk fumigation of apples with ethylene dibromide under plastic tarpaulins for apple maggot. 1225

The sorption and retention of ethylene dibromide by fumigated citrus and avocado fruits. 1237

Tolerance of avocados to ethylene chlorobromide and ethylene dibromide dipping and fumigation. 1273

Within-package ethylene dibromide fumigation of mangoes and grapefruit in fiberboard cartons to destroy Mexican fruit fly infestations. 1392

Effects of temperature, reduced pressure, and moisture content on sorption and retention of ethylene dibromide by wheat and corn. 1398

Recovery of ethylene dibromide residues from fumigated whole kernel and milled wheat fractions. 1522

Soil fumigant determination: Extraction and determination of ethylene dibromide in soils. 1836

ETHYLENE OXIDE
Ethylene oxide fumigants to eliminate quarantinable snails Cochlicella or Theba in cargo. 1402

Ethylene oxide as a fumigant against insects. 1601

ETHYLENIMINE
Insect sterilant experiments in outdoor cages with apholate, metepa, and four bifunctional aziridine chemicals against the house fly. 1675

EUPHORBIA PULCHERRIMA
The influence of pH on growth of Thielaviopsis basicola in culture and the development of Thielaviopsis root rots of poinsettia and bean in soil. 736

Recent occurence of bacterial blight of poinsettia in Florida. 885

The lewis mite, Eotetranychus lewisi, on greenhouse poinsettia. 1101

EUROPEAN FOULBROOD
The epizootiology of European foulbrood of the larval honey bee, Apis mellifera Linnaeus. 275

EVERGLADES
Variability of Xanthomonas vesicatoria in the Everglades and Lower East Coast of Florida. 1011

EXCRETA
Quantitive relationship between consumption and excretion of dry matter by larvae of the pale western cutworm, Agrotis orthogonia Morr. (Lepidoptera: Noctuidae). 458

Differential susceptibility of maggots of several species to droppings from chickens fed insecticide-treated rations. 1359

DDT- METABOLISM and excretion in Coleomegilla maculata De Geer. 1544

Metabolism, storage, and excretion of C14-endosulfan in the mouse. 1586

Absorption, excretion, and metabolism of a new antibacterial agent, nalidixic acid. 1643

A small cage for the collection of insect excreta. 1914

EXOCORTIS (CITRUS)
Exocortis and other problems with trifoliate orange rootstock. 939

New test varieties for exocortis virus. 964

Strains of exocortis virus. 965

Seed transmission of exocortis virus. 966

Tahiti lime bark disease is caused by exocortis virus. 967

Exocortis in Corsica. 1028

EXPERIMENTAL INSECTICIDES
Experimental insecticides applied as sprays to control thrips and the cotton fleahopper. 1584

EXPERIMENTAL INSECTS
An improved method for storage of the alfalfa weevil in the laboratory. 1888

EXPERIMENTAL TREATMENTS
The effect of physio-chemical treatments on diapausing eggs of northern corn rootworms, Diabrotica longicornis. 348

EXPOSURE
A technique of continuous exposure for determining resistance of house flies to insecticides. 306

EXTRACTION TECHNIQUES
Flotation technique for extracting eggs of Diabrotica spp. and other organisms from soil. 1944

EXTRACTS
An arrestant and feeding stimulant for the boll weevil in water extracts of cotton-plant parts. 1180

Auxin content of extracts of certain tolerant and susceptible host plants of Toxoptera graminum, Macrosiphum pisi, and Therioaphis maculata and relation to host plant resistance. 1181

EXUDATES
Chemotaxis of zoospores for root exudates in relation to infection by Phytophthora cinnamomi. 1055

Persistence and translocation of exogenous regulating compounds that exude from roots. 1762

EYE IRRITATION
Phytotoxicity of gas mixtures: Plant damage and eye irritation from ozone-hydrocarbon reactions. 1583

FALCONIFORMES
Species of Colpocephalum (Mallophaga: Menoponidae) parasitic upon the Falconiformes. 180

FATS
The effect of temperature on the consumption of fat during pupal development in Glossina. 319

Seasonal variations in the fat content and size of Glossina swynnertoni Austen. 397

Determination of NN-diphenyl-p-phenylenediamine (DPPD) in fat and other biological materials. 1441

Insecticide residues in meat and milk: determination of heptachlor epoxide in fat and milk. 1501

FECES
Control of house flies in bovine feces by a feed additive containing Bacillus thuringiensis var. thuringiensis Berliner. 1342

Fly control in feces from cattle fed Co-ral. 1360

FEED
Deterioration of stored feedstuffs: Relation of interspace relative humidity to growth of molds and heating of feed ingredients and feed mixtures. 1377

Determination of NN-diphenyl-p-phenylenediamine (DPPD) in fat and other biological materials. 1441

The isolation and identification of the amino-nitro-o-toluamide formed by the biological reduction of 3,5-dintro-o-toluamide. 1860

The identification of 3,5-dinitro-o-toluamide (Zoalene) and possible metabolites by paper chromatography. 1863

FEED ADDITIVES
Control of house flies in bovine feces by a feed additive containing Bacillus thuringiensis var. thuringiensis Berliner. 1342

Are animal feed additives hazardous to human health. 1440

Combination of therapeutic agents. 1456

The additives amendment in practice. 1457

The rationale for medicated feeds. 1472

The impact on the analytical chemist of government regulations pertaining to tissue residues. 1483

A broad view of the problem of additives in feeds and foods. 1486

A colorimetric procedure for the microdetermination of sulfonamides in animal tissues. 1502

Metabolism of two forms of dietary arsenic by the rat. 1503

Metabolic stability of radioactive arsanilic acid in chickens. 1510

The significance for the processor of feed additive residues in foods. 1514

Feed additive residues:Determination of 3,5-dinitro-o-toluamide (Zoalene) in chicken tissues. 1523

Determination of trace amounts of nitrofurazone in milk. 1529

Feed additive residues:Determination of 3-amino-5-nitro-o-toluamide (ANOT) in chicken tissues. 1530

Metabolism of arsanilic acid. II. Localization and type of arsenic excreted and retained by chickens. 1664

Acute and subacute toxicity of several organophosphorus insecticides to chicks. 1689

Feed additives analysis: Microanalysis of piperazine. 1811

Feed additives: Determination of 3,5 dinitro-o-toluamide (zoalene) in feed concentrates. 1861

FEED CONCENTRATES
Feed additives: Determination of 3,5 dinitro-o-toluamide (zoalene) in feed concentrates. 1861

FEED GRAINS
A method and machine for detecting living internal insect infestation in wheat. 1096

FEED MILLING
Insects found in Ohio grain elevators and feed mills. 1399

FEED TOXICITY
Are animal feed additives hazardous to human health. 1440

Urea poisoning of cattle. 1659

Acute and subacute toxicity of several insecticides to chicks. 1688

Relationship between short- and long-term feeding studies in designing an effective toxicity test. 1709

FEEDING
Elm spanworm head capsule widths and instars. 46

A comparison of the number of tropical rat mites and tropical fowl mites that fed at different temperatures. 344

A comparison of the number of tropical rat mites and tropical fowl mites that fed under varying conditions of humidity. 345

Cotton extracts as arrestants and feeding stimulants for the boll weevil. 460

Response of five species of insects to water extracts of their host plants. 464

Substances inhibitory to insect feeding with insecticidal properties from fungi. 474

The effect of heptachlor and chlordane on the foraging activity of imported fire ants. 498

Group effects on feeding in adult males of the desert locust Schistocerca gregaria (Forsk.), in relation to sexual maturation. 553

Influence of the glandless genes on feeding, oviposition, and development of the boll weevil in the laboratory. 1183

Dimensions of the clear areas in the skin of chicks that resulted from the feeding by larvae of two strains of Trombicula splendens at different periods. 1332

In vivo studies of tissue reaction in chicks resulting from the feeding by larvae of Trombicula splendens. 1334

Low level feeding of ronnel in a mineral salt mixture for area control of the face fly, Musca autumnalis. 1362

Tests for boll weevil control with a systemic insecticide and a boll weevil feeding stimulant. 1680

A heating apparatus for conducting feeding experiments with blood-sucking mites. 1895

Apparatus for studying feeding and oviposition by Angoumois grain moth adults. 1949

FEEDING ABILITY
Influence of cold storage on the viability of alfalfa weevil eggs and feeding ability of hatching larvae. 341

FEEDING STIMULANT
An arrestant and feeding stimulant for the boll weevil in water extracts of cotton-plant parts. 1180

FEEDING STUDY
Relationship between short- and long-term feeding studies in designing an effective toxicity test. 1709

FENTHION
Metabolism of and residues associated with dermal and intramuscular application of radiolabeled Fenthion to dairy cows. 1350

Nuclear magnetic resonance in the examination of the thermal decomposition of O,O-dimethyl O(4-(methylthio)-3-tolyl) phosphorothioate. 1831

FENUSA PUSILLA
Tests of systemics for control of birch leaf miner. 1229

FERMENTATION
Production of heat during fermentation of cacao beans. 854

FERTILITY
Oviposition and fecundity of boll weevils in mass rearing laboratory cultures. 325

Studies on oviposition and fecundity of Ctenicera destructor (Brown) (Coleoptera:Elateridae). 360

The utility of sealed punctures for studying fecundity and egg laying by the boll weevil. 377

The effects of gamma radiation on mating competitiveness and fecundity of Hippelates pusio Loew. 381

FERTILIZATION (PLANTS)

The effects of different plant foods on the fecundity, fertility, and development of a cotton stainer, Dysdercus superstitiosus (F.). 390

Effects of some antibiotics and other compounds on fertility and mortality of orchard mites. 421

Antifertility effect of the chemosterilant apholate on the male boll weevil. 433

Effect of host plant condition and fertilization on two-spotted spider mite fecundity. 435

Some effects of gamma radiation on fertility of Drosophila melanogaster and viability of sperm after multiple matings of males. 436

Mortality and fertility response of Musca domestica adults to certain known mutagenic or anti-tumor agents. 477

The effects of various larval and adult diets on the fecundity and longevity of the boilworm, tobacco budworm, and cotton leafworm. 503

The effect of temperature fecundity and longevity of the black blow fly, Phormia regina. 558

Effect of heat on the fertility of the codling moth, Carpocapsa pomonella (L.) (Lepidoptera:Olethreutidae. 569

Biology of the mountain pine beetle, Dendroctonus monticolae Hopkins, in the East Kootenay region of British Columbia II. Behaviour in the host, fecundity, and internal changes in the female. 583

Reduced fecundity of the two-spotted spider mite on metalcheiate-treated leaves. 647

The effect of plant nutriton on the fecundity of two strains of two-spotted spider mite. 701

Effects of some chemosterilants on the viability of eggs, fecundity, mortality, and mating of the cabbage looper. 1615

FERTILIZATION (PLANTS)
Effect of host plant condition and fertilization on two-spotted spider mite fecundity. 435

Stem pitting problem in a Pera sweet orange fertilization experiment. 950

Fertilization of pycnia with urediospores in Puccinia graminis var. tritici. 1740

FERTILIZER SPREADERS
Hand seeder adapted for precision planting or for application of granulated insecticides or fertilizers. 1956

FERTILIZERS
The influence of fertilizers on sugar beets which received insecticide-fungicide seed treatments. 1230

Effects of nitrogen and potassium fertilisers on the mineral status of perennial ryegrass (Lolium perenne). I. Mineral content. 1785

Effects of nitrogen and potassium fertilisers on the mineral status of perennial ryegrass (Lolium perenne). II. Anion -cation relationship. 1786

Biuret formation in the manufacture of urea. 1837

FIBERBOARD
Within-package ethylene dibromide fumigation of mangoes and grapefruit in fiberboard cartons to destroy Mexican fruit fly infestations. 1392

FIELD BINS
Effects of soil fumigants on the occurrence of nematodes in field bins. 1305

FIELD EVALUATION
A large-scale field evaluation of boll weevil diapause control in Mississippi. 522

FIELD STUDY
The variability of fly-round catches in field study of Glossina. 68

FIELD TEST
A field test of lindane for prevention and control of attack by Ips confusus (LeConte) (Coleoptera:Scolytide) in slash. 1242

FIELD-CAGE
Observations on emergence and life-span of wheat bulb fly, Leptohylemyia coarctata (Fall.) ditions. 361

FISH POISONS
Studies on the chronic toxicity of Pro-Noxfish, a proprietary synergized rotenone fish-toxicant. 1558

FLASK COMBUSTION
Soil effects on pesticides:Determination of carbon in organic soils by oxygen flask combustion. 1412

FLIGHT ACTIVITY
Potato leafhopper trapping studies to determine local flight activity. 176

FLIGHT PATTERNS
An apparatus for continuously recording aphid flights from their hosts. 1899

FLIGHT RANGE
The flight of Culicoides impunctatus Goetghebuer (Diptera, Ceratopogonidae) over moorland and its bearing on midge control. 114

Flight range observations on Lygus lineolarius and certain other Hemiptera. 136

FLIGHT SEASON
Biology and ecology of the garden chafer, Phyllopertha horticola (L.).VII. the flight season: male and female behaviour, and concluding discussion. 525

FLORESCENT DYES
Florescent dyes for mating and recovery studies with cabbage looper moths. 659

FLORIDA
Establishment of Aphytis holoxanthus as a parasite of Florida red scale in Florida. 31

Aphid trap collections over a three-year period from four southern Florida locations. 253

Pine sawfly larvae, Neodiprion excitans, survive subfreezing temperatures in Florida. 378

Recent occurence of bacterial blight of poinsettia in Florida. 885

Watermelon disease incidence in central Florida, 1931-1959. 974

Variability of Xanthomonas vesicatoria in the Everglades and Lower East Coast of Florida. 1011

FLOUR
The fate of sulfuryl fluoride in wheat flour. 1847

FLUE-CURED TOBACCO
Insecticide deposits from dusts or sprays applied by aircraft to flue-cured tobacco. 1177

FLUORESCENCE
Plant tissue analysis: X-ray fluorescence determination of zinc in plant tissues. 1801

FLUORESCENT SUBSTANCES
Fluorescent biological stains as markers for Drosophila. 239

FLUORINE COMPOUNDS
Determination of organic fluorine residues in blackcurrants. 1454

FLUOROMETRY
Fluorometric assay for gibberellic acid. 1865

FLY TRAPS
Further studies on techniquea for sampling the density of African house fly populations. 1. A field comparison of th use of the Scudder grill and the sticky-flytrap method for sampling the indoor density of African house flies. 185

FLY-ROUND
The variability of fly-round catches in field study of Glossina. 68

FOLIAR APPLICATION
Insecticide residues: Persistance of dimethoate and metabolites following foliar application to plants. 1451

FOOD
Water and food relationship of the eggs and first instar nymph of Eurygaster integriceps with the aid of P32. 574

Differential susceptibility of maggots of several species to droppings from chickens fed insecticide-treated rations. 1359

A broad view of the problem of additives in feeds and foods. 1486

FOOD ADDITIVES
Food additives, safety: Effect of feeding butylated hydroxyanisole to dogs. 1711

FOOD ANALYSIS
Symposium on radioactive fallout in relation to foods. 1598

FOOD CONTAMINATION
Radionuclides in milk. 1563

Dietary considerations of the radionuclide contamination of nonmilk foods. 1706

FOOD FLAVOR
Pesticides and food flavor:Studies in taste panel methodology. 1488

Pesticides and food flavor:Influence of herbicides on flavor of processed fruits and vegetables. 1498

Pesticides and food flavor:Effect of insecticides and fungicides on the flavor quality of fruits and vegetables. 1505

The effect of some fungicides on the flavor of canned strawberries. 1621

FOOD HABITS
Further studies on the food-gathering behaviour of bumble bees (Hymenoptera: Apidae). 440

FOOD HANDLING
The incidence, importance, and control of insects found in stored food and food-handling areas of ships. 1386

FOOD MOISTURE
The stabilization of relative humidity with honey in closed systems. 287

Effect of moisture content on the storage of Brazil nuts. 1371

FOOD PLANTS
Further tests of the effect of food plants on the migratory grasshopper. 283

FOOD PROCESSING
The significance for the processor of feed additive residues in foods. 1514

FOOD RESIDUES
The significance for the processor of feed additive residues in foods. 1514

FOOD STORAGE
Report and abstracts of the 1959 meeting of the northeastern division of the American Phytopathological Society. 717

Effect of moisture content on the storage of Brazil nuts. 1371

The incidence, importance, and control of insects found in stored food and food-handling areas of ships. 1386

FORAGE PLANTS
Pectic substances in forages and their relationship to bloat. 720

The Helminthosporium gramineum complex and related species on cereals and forage grasses. 751

Helminthosporium Dictyoides and related species on forage grasses. 752

Dagger nematodes associated with forage crops in New York. 1318

Dimethoate residues on soybean, corn, and grass forage. 1431

Residues of endosulfan in meat and milk of cattle fed treated forages. 1432

Disappearance of guthion from forage crops in Massachusetts. 1519

FOREIGN TRADE
Quarantine problems associated with the importation of bananas from Mexico. 794

FOREST INSECTS
The feasibility of using a neoaplectanid nematode for control of some forest insect pests. 205

Natural control of the eastern tent caterpillar and notes on its status as a forest pest. 1157

The dye-tracer methods measuring aerial spray deposits in forest insect research. 1990

FORFICULA AURICULARIA
Tests with attractants and a simple trap for the European earwig, Forficula auricularia. 1939

FRACTIONATION
The fractionation and solubilization of Prodenia eridania chitin synthetase. 480

FRAGARIA VESCA
A genetic abnormality in an Idaho clone of fragaria vesca. 830

FRANKLINIELLA FUSCA
Influence of thrips on cotton yields in Alabama. 1260

FRANKLINIELLA TRITICI
Flower thrips in outdoor rose fields and an improved method of extracting thrips from rose flowers. 1133

Influence of thrips on cotton yields in Alabama. 1260

FRANKLINIELLA VACCINII
Control of the blueberry thrips in Maine. 303

FRASS
Experimental field techniques used to evaluate gypsy moth, porthetria dispar, control in new york. 339

FREIGHT
Ethylene oxide fumigants to eliminate quarantinable snails Cochlicella or Theba in cargo. 1402

FRUIT
An ecological study of arthropod populations on apple in northeastern Wisconsin: species affecting the fruit. 165

The source of inoculum for bacterial canker and blast of stone fruit trees. 799

Occurrence of Cytospora canker in stone fruit trees in California. 876

Pathogenic variation of Cytospora rubescens isolates on stone fruit varieties. 1017

A virus-caused stunt of apricot and its relationship to certain other stonefruit virus diseases. 1032

Fungicide residues:A modified Gibbs method for the determination of 1 p.p.m. or less of o-phenylphenol in fruits. 1491

Pesticides and food flavor:Influence of herbicides on flavor of processed fruits and vegetables. 1498

Pesticides and food flavor:Effect of insecticides and fungicides on the flavor quality of fruits and vegetables. 1505

The control of mites on deciduous fruit crops with bina-

FRUIT DECAY

pacryl. 1542

FRUIT DECAY
Evaluation of ammonia-generating formulations for control of citrus fruit decay. 795

FRUIT DEFORMITY
The relationship of lygus bugs and thrips to fruit deformity in strawberries. 1062

FRUIT SETTING
Preliminary studies on the effect of lygus bugs on the set and yield of tomatoes. 1092

Honey bee visitors and fruit set of cantaloupes. 1185

FRUIT SPOT (BANANAS)
Banana fruit-spot caused by Deightoniella torulosa (Syd.) Ell. 891

FUCHSIA
A root disease of fuchsia caused by Phytophthora parasitica. 931

The influence of temperature on development of Phytophthora parasitica root rot of Fuchsia. 932

FUMARIC ACID
The role of fumaric acid, a fungal toxin, involved in the hull rot disease of almond. 894

A quantitative method for determining fumaric acid, a toxin involved in the hull rot disease of almond. 895

FUMIGANT RESIDUES
Fumigant residues: Retention of acrylonitrile and carbon tetrachloride by shelled walnuts fumigated with Acrylon. 1434

FUMIGANTS
Studies of phosphine as a fumigant for sacked rice under gas-tight tarpaulins. 1381

Ethylene oxide fumigants to eliminate quarantinable snails Cochlicella or Theba in cargo. 1402

Methyl bbromide, sulfuryl fluoride, and other fumigants against quarantinable Cochlicella and Theba snails. 1678

Drywood termite metabolism of Vikane fumigant as shown by labeled pool technique. 1848

The automatic measurement of fumigant concentrations. 1935

FUMIGATION
Tolerance of some imported vegetables to methyl bromide fumigation and hot water treatments. 721

Comparison of soil surface treatments of some fumigants and soil insecticides for apple maggot control. 1179

Fumigation of apples to control the apple maggot, Rhagoletis pomonella. 1224

Bulk fumigation of apples with ethylene dibromide under plastic tarpaulins for apple maggot. 1225

The sorption and retention of ethylene dibromide by fumigated citrus and avocado fruits. 1237

Tolerance of avocados to ethylene chlorobromide and ethylene dibromide dipping and fumigation. 1273

Dosage-time relationships between 80:20 (CCL4: CS2) and adult rice weevils, Sitophilus oryzae. 1389

Dosage applied and concentration obtained in the funigation of various commodities with methyl bromide. 1390

Within-package ethylene dibromide fumigation of mangoes and grapefruit in fiberboard cartons to destroy Mexican fruit fly infestations. 1392

Tolerance of imported garlic bulbs to methyl bromide fumigation and hot-water dips. 1396

Fumigation efficiency as affected by exposures, formulations and by insect species and stages. 1474

Recovery of ethylene dibromide residues from fumigated whole kernel and milled wheat fractions. 1522

The fumigant toxicity of two new chemicals to stored-product insects. 1697

The influence of oil content on the susceptibility of seeds to fumigation with methyl bromide. 1726

A two-bottom two-way plow sole fumigator. 1898

Equipment for checking fumigation effectiveness in silo bins. 1937

FUNGI
The fungus Empusa aphidis Hoffman parasitic on the wooly pine needle aphid, Schizolachnus pini-radiatae (Davidson). 411

Substances inhibitory to insect feeding with insecticidal properties from fungi. 474

Report and abstracts of the 1959 meeting of the northeastern division of the American Phytopathological Society. 717

A biochemical response of apple tissues to fungus infection. 733

A soil infestation method for studying spores of Helminthosporium sativum. 747

Some sap-stain fungi found in Minnesota. 765

The effect of temperature on some entomophthoraceous fungi. 826

Changes in potato proteins induced by fungus infections. 1000

Protein synthesis by nongerminated fungal spores including uredospores of the bean rust fungus. 1002

The use of nematode-trapping fungi to control root-knot nematodes. 1304

Influence of various factors on the deterioration of stored corn by fungi. 1375

Esters produced by endoconidial-forming fungi. 1733

Differential longevity of tellospores of pathogenic races of Tilletia and T. foetida. 1752

The effect of mineral nutrition on spore germination and growth responses in Aspergillus niger and some other fungi. 1771

Uptake and innate toxicity of dodine (n-dodecylguanidine acetate) to fungus conidia. 1773

Relationship of lipid contents of fungal conidia to uptake of toxicants. 1774

FUNGI GENETICS
Dominance of avirulence and monogenic control of virulence in race hybrids of Ustilago avenae. 836

FUNGICIDE EVALUATION
A method of evaluating fungicides in the soil under controlled conditions. 944

FUNGICIDE RESIDUES
Colorimetric determination of Dexon residues in crops. 1424

Fungicide residues: colorimetric estimation of dodecylguanidine acetate residues. 1527

FUNGICIDES
Evaluation of soil fungicides against Fusarium solani isolated from feeder roots of citrus trees. 767

Broad spectrum fungicides tested for control of melting-out of Kentucky bluegrass and Sclerotinia dollar spot of Seaside bentgrass. 779

Selective protection afforded by certain seed and soil fungicides. 864

Effect of soil fungicides upon soil-borne plant pathogenic

bacteria and soil nitrogen. 906

A method of evaluating fungicides in the soil under controlled conditions. 944

The partial purification and biological activity of an antifungal antibiotic produced by a strain of Streptomyces griseus. 1018

Influence of fungicides on microorganisms associated with apparently healthy strawberries. 1026

The influence of fertilizers on sugar beets which received insecticide-fungicide seed treatments. 1230

Chemical and microbiological surveys on the effects of dithiocarbamate fungicides on wine-making. 1443

Fungicide residues:A modified Gibbs method for the determination of 1 p.p.m. or less of o-phenylphenol in fruits. 1491

Pesticides and food flavor:Effect of insecticides and fungicides on the flavor quality of fruits and vegetables. 1505

Mechanisms of fungitoxic action of n-dodecylguanidine acetate. 1559

The effect of some fungicides on the flavor of canned strawberries. 1621

The effect of manganese ethylene bisdithiocarbamate (Maneb) on some chemical constituents of Colletotrichum capsici. 1654

A holly leaf spot associated with the use of copper fungicides. 1745

Seed disinfection: Fungicide and dye distribution in liquid seed treatment. 1763

Fungistatic effects of lignin, lignin monomers, and model substances. 1764

Effect of copper and glyodin fungicides on amino acid and sugar content and oxygen use of Colletotrichum capsici. 1793

Antifungal activity of substituted nitroanilines and related compounds. 1820

Systemic fungicides. 1822

Two fungicidally active 5-chloro-4-aryl-1,2-dithiol-3-ones derived from cumene and p-cymene. 1824

FUNGITOXICITY
Comparative fungitoxicity of some mono- and dialkyl-substituted dithiocarbamate vapors and solutions. 1751

FUNGUS DISEASES (INSECTS)
The fungous disease caused by Entomophthora grylli Fres., and its effects on grasshopper populations in Saskatchewan in 1963. 175

FUNGUS DISEASES (PLANTS)
Helminthosporium Dictyoides and related species on forage grasses. 752

Dominance of avirulence and monogenic control of virulence in race hybrids of Ustilago avenae. 836

Cochliobolus victoriae, the perfect stage of Helminthosporium victoriae. 917

FURMETHONOL
Determination of furaltadone in milk. 1449

FUSARIA
Etiology of wilt in fusarium-infected cotton. 1007

FUSARIUM
A Fusarium wilt of Tagetes.
olsen, carl m. 722

Physical barriers in relation to Fusarium wilt resistance in bananas. 739

Effects of Streptomyces and Trichoderma on Fusarium. 770

Mechanics of water transport in healthy and Fusarium-wilted tomato plants. 790

Influence of nitrogen and potassium nutrition levels on the development of Fusarium systemic wilt of carnations. 811

Relationship between injury by the clover root curculio and incidence of Fusarium root rot in Ladino white clover. 820

Variations in respiratory responses in Fusarium-infected tomato plants. 971

Movement of Radopholus similis into rough lemon feeder roots and in soil, and its relation to Fusarium in the roots. 1290

Role of pectic enzymes in susceptibility and resistance to Fusarium Verticillium wilts of plants. 1736

FUSARIUM OXYSPORUM
The mechanism of wilting incited by Fusarium in red clover. 769

Fusarium wilt of Sedum. 942

FUSARIUM ROSEUM
Determination of soil fungi antagonistic to Fusarium roseum. 1044

FUSARIUM SOLANI
Evaluation of soil fungicides against Fusarium solani isolated from feeder roots of citrus trees. 767

The mechanism of wilting incited by Fusarium in red clover. 769

F1 PROGENY
Laboratory and field studies of F1 progenies from reciprocal matings of biotypes of the European corn borer. 217

GALLERIA MELLONELLA
Greater wax moth develops on bumble bee cells. 167

GAMMA RAYS
Differential effect of gamma radiation on fruit flies and fruit fly parasites. 277

Influence of aeration during gamma irradiation of screw-worm pupae. 289

Gross effects of gamma radiation on the Indian-meal moth and the angoumois grain moth. 338

The effects of gamma radiation on mating competitiveness and fecundity of Hippelates pusio Loew. 381

Some effects of gamma radiation on fertility of Drosophila melanogaster and viability of sperm after multiple matings of males. 436

Effects of gamma radiation on mating competitiveness and behavior of Drosophila melanogaster males. 437

Effects of gamma radiation on codling moth eggs. 447

Some effects of gamma radiation on the horn fly. 492

Control of the Queensland fruit fly by gamma irradiation. 504

Studies on eradication of Anopheles pharoensis by the sterile-male technique using cobalt. II. Induced dominant lethals in the immature stages. 644

Effect of gamma radiation on Trogoderma glabrum and Attagenus piceus. 649

Effects of gamma radiation on Rhyzopertha dominica, Sitophilus oryzae, Tribolium confusum, and Lasioderma serricorne. 650

Exploratory studies on gamma radiation for the sterilization of the boll weevil. 697

Suppression of the reproductive potential of the codling moth by gamma irradiated males in caged orchard trees. 709

GARLIC

Mating competition of gamma-irradiated and nonirradiated male Trogoderma glabrum Herbst. 710

Growth, reproduction, mortality, and pathologic changes in rats fed gamma irradiated potatoes. 1562

GARLIC
Tolerance of imported garlic bulbs to methyl bromide fumigation and hot-water dips. 1396

GASES
Phytotoxicity of gas mixtures: Plant damage and eye irritation from ozone-hydrocarbon reactions. 1583

GC-1283
Imported fire ant toxic bait studies: GC-1283, a promising toxicant. 1639

GENERAL CHEMICAL 4072
Field tests of dichlorvos, General Chemical 4072, Hooker Compound, and synergized dDT against Musca domestica. 515

GENES
Inheritance of 5 genes conditioning pathogenicity in Erysiphe graminis f. sp. hordei on barley. 901

Genes conditioning pathogenicity in Erysiphe graminis f. sp. hordei on barley variety Atlas 46. 902

GENETICS
A genetic abnormality in an Idaho clone of fragaria vesca. 830

The genetics of compatibility in Cochliobolus carbonum. 919

GENOTYPES
Variation in maize seedling blight symptoms with changes in pathogen species, isolate and host genotype. 857

GEOMETRIDAE
The looper complex in Alabama (Lepidoptera piusiinae). 24

Characters for determining sex in elm spanworm pupae. 621

GEORGIA
Biology of the lesser cornstalk borer in south Georgia. 126

Leaf spot of peanut in georgia caused by Leptosphaerulina archidicola. 877

Relative seasonal abundance of bollworm and tobacco budworm larvae on cotton in Georgia. 1134

Persistence of insecticides in soil and their effects on cotton in Georgia. 1417

Observations on the biology of the southern corn rootworm and insecticidal tests for its control on peanuts in Georgia. 1612

GEOTRICHUM CANDIDUM
Pathogenicity and taxonomy of Geotrichum candidum. 758

GHANA
A note on Glossina medicorum Aust. (Diptera) in Ghana. 25

GIBBERELLA ZEAE
The response of corn to inoculation with Diplodia zeae and Gibberella zeae. 802

GIBBERELLIC ACID
Stimulation of broomrape seed germination. 910

Effect of gibberellic acid on the extraction of protein from the leaves of spring vetches (Vicia sativa L.). 1730

Use of gibberellic acid in facilitating the mechanical harvesting of dwarf beans. 1734

Gibberellic acid. XI.-- THE growth-promoting activities of some functional derivatives of gibberellic acid. 1853

Fluorometric assay for gibberellic acid. 1865

GIBBERELLINS
Cross-inoculation of tomato and corn with Gibberella. 748

Determination of endogenous gibberellins in green malt by isotopic, derivative dilution procedures. 1843

GIRDLING (INSECTS)
Secondary bagworm injury. 1241

GLANDLESS GENES
Influence of the glandless genes on feeding, oviposition, and development of the boll weevil in the laboratory. 1183

GLANDS (INSECTS)
Note on the movements of the mandibular and maxillary stylets of the aphid, Myzus persicae (Sulzer). 13

GLANDS (PLANTS)
The comparative preference of insects for glanded and glandless cottons. 1148

GLASS CONTAINERS
The use of Fluon to prevent the escape of stored-product insects from glass containers. 1960

GLOMERELLA CINGULATA
Fungistatic effects of lignin, lignin monomers, and model substances. 1764

GLOSSINA
Use of WHO tsetse fly kit for determining resistance in the stable fly. 536

GLOXINIA
Sclerotina blight of gloxinia. 832

A Myrothecium rot of gloxinias. 1767

GLUCOSE-U-C14
Amino acid requirements for the wheat stem sawfly determined with glucose-U-C14 after vacuum-infiltration. 457

GLUTAMIC ACID
Metabolism of labeled glutamic acid in adult German cockroaches. 511

GNOMONIA VENETA
The early leaf and twig blight stage of sycamore anthracnose. 915

GOATS
The metabolism of P32-labeled Ciodrin in a lactating goat. 1329

GOMPHRENA GLOBOSA
Formation of local lesions on Gomphrena globosa by viruses from red clover. 817

GONIOZUS INDICUS MUESEBECK
Goniozus indicus as a parasite of the sugarcane borer. 395

GOSSYPARIA SPURIA
European elm scale control investigations. 1015

Preliminary observations concerning the use of systemic insecticides in large trees for control of the European elm scale. 1708

GOSSYPOL
Relation of gossypol content of cotton plants to insect resistance. 301

Gossypol extractants: Oral toxicity to poultry of a commercial octylamine. 1571

GRAIN
The Helminthosporium gramineum complex and related species on cereals and forage grasses. 751

The effects of percussion on insect pests of grain. 1066

Cereal aphid capture in yellow baffle trays. 1087

The infestation of Canadian produce inspected in United Kingdom ports between 1953 and 1959. 1140

Cooling bulk grain in the British climate to control stor-

age insects and to improve keeping quality. 1372

Insect and mite infestation in empty granaries in the prairie provinces. 1391

Fumigation efficiency as affected by exposures, formulations and by insect species and stages. 1474

Uptake and distribution of strontium in vegetables and cereals. 1737

A spear for sampling bulk grain by suction. 1882

GRAIN ELEVATORS
Insects found in Ohio grain elevators and feed mills. 1399

GRAIN MOISTURE
Effects of temperature, reduced pressure, and moisture content on sorption and retention of ethylene dibromide by wheat and corn. 1398

GRAIN PROTECTANTS
Laboratory evaluation of several chemical protectants against the southern cowpea weevil, Callosobruchus chinensis, on stored dried beans in Korea. 1379

GRAIN SAMPLING
A spear for sampling bulk grain by suction. 1882

GRANARY
Insect and mite infestation in empty granaries in the prairie provinces. 1391

GRANULAR INSECTICIDES
Precision equipment for applying granular formulations in insecticide tests. 1926

GRANULES
Alfalfa weevil control studies in West Virginia. 365

The role of carriers in the performance of granular formulations of parathion for mosquito control. 538

Granular application of systemics for control of european pine shoot moth. 1154

GRANULOSES
A Pieris brassicae (Linnaeus) culture resistant to a granulosis. 353

Serological relationships between insect viruses and their inclusion-body proteins. 481

Granulosis of the granulate cutworm. 627

Observations on the role of stress in a granulosis of the variegated cutworm. 629

GRAPEFRUIT
Infectious variegation of citrus found in Florida. 822

On the impietratura of grapefruit. 957

Within-package ethylene dibromide fumigation of mangoes and grapefruit in fiberboard cartons to destroy Mexican fruit fly infestations. 1392

Responses of grapefruit trees to various spray oil fractions. 1735

GRAPES
The black vine weevil Brachyrhinus sulcatus, as a pest of grapes in south central washington. 775

Control of the black vine weevil on concord grapes in central Washington. 1086

Microcoulometric gas chromatographic analysis of grapes and cottonseed for chlorobenzilate residues. 1433

Toxicity of insecticide residues on grape foliage to redbanded leaf roller. 1581

GRAPHOLITHA MOLESTA
Some effects of DDT on Pulvinaria vitis (L.) (Homoptera: Coccidae) infesting peach in Ontario. 1202

GRASS-MAT PASSAGES
A trial use of grass-mat passages in protecting humans from attacks by tsetse flies. 713

GRASSES
Survey of the Hemiptera and Homoptera infesting grasses (Gramineae) in New York. 81

Suitability of Oryza and other grasses as hosts of Sogata orizicola Muir. 778

Tolerance of several grass species to 2-Chloro-s-triazine herbicides in relation to degradation and content of benzoxazinone derivatives. 1744

GRASSHOPPERS
The importance of timing in adult grasshopper surveys. 50

A critical appraisal of grasshopper forecast maps in Saskatcewan, 1936-1958. 51

The fungous disease caused by Entomophthora grylli Fres., and its effects on grasshopper populations in Saskatchewan in 1963. 175

Surveys of adult grasshoppers in Saskatchewan in relation to seasonal development. 193

Observations on the life history of the desert grasshopper (Trimerotropis pallidipennis pallidipennis) in laboratory and insectary cages. 284

Failure of the grasshoppers Melanoplus bilituratus and Melanoplus confusus to cross-mate in confinement. 298

Cholesterol analog utilization by grasshoppers. 478

Life history and behaviour of Scelio calopteni Riley (Hymenoptera: Scelionidae), a parasite of grasshopper eggs. 564

The progress of nymphal development in pest grasshoppers (Acrididae) of western Canada. 571

Ovarioles and developing eggs in grasshoppers. 613

Application of systemic insecticides as seed treatment to protect wheat plants against grasshoppers and wheat stem sawfly. 1238

Evaluation of three alternative insecticides for control of grasshoppers in Alberta. 1619

A metal cage for rearing grasshoppers. 1947

GRASSLAND COMMUNITIES
A quick trap for area sampling of arthropods in grassland communities. 655

GRAYWALL (TOMATOES)
Diagnostic aids in distinguishing internal browning and graywall of tomato. 908

GREEN LACEWING
Toxicity of some pesticides to eggs, larvae, and adults of the green lacewing, Chrysopa carnea. 1549

GREEN RICE LEAFHOPPER
The green rice leafhopper, Nephotettix bipunctatus cincticeps, and its control in Korea. 1067

GREEN SPRUCE LEAF MINERS
Life history and habits of the green spruce leaf miner, Epinotia nanana (Treitschke) (Lepidoptera: Tortricidae). 352

GREEN-STRIPED FOREST LOOPER
Description and life history of Melanolophia imitata (Walker) (Lepidoptera: Geometridae. 375

GREENHOUSE CULTURE
Establishing and maintaining a culture of Hylemia brassicae (Bouche) Diptera:Anthomyiidae) in the greenhouse or laboratory. 187

The lewis mite, Eotetranychus lewisi, on greenhouse poinsettia. 1101

Detecting corn seedling differences in the greenhouse by

GREENHOUSE HEATING
visual classification of damage by the fall armyworm. 1268

Greenhouse pathogenicity trials with nematode-infested soil. 1296

GREENHOUSE HEATING
Heat-induced stolon rot of ladino white clover in the greenhouse. 855

GREENHOUSES
Controlling the corn leaf aphid, Rhopalosiphum maidis, in greenhouses. 1253

Vaporized Dibrom for control of Drosophila in lemon storage houses. 1387

Toxicity of Dibrom vapors to greenhouse insects. 1406

GRINDELIA SQUARROSA
A new species of Dactynotus Rafinesque (Homoptera: Aphididae) from Grindelia squarrosa (Pursh) Dunal. I99

GROWTH FACTORS
Low caloric value of carobs as the possible cause of growth depression in chicks. 1539

GUATEMALA
Nemic parasites of coffee in Guatemala. 1282

GUIGNARDIA BIDWELLII
Growth and sporulation of Guignardia bidwellii in pure culture and in the field. 761

GUINEA PIGS
Toxicity of intravenously injected uranium in guinea pigs. 1594

GUTTATION
Types of injuries on cantaloupe leaves associated with guttation. 841

HABITATS
Larval habitats, development, and parasites of some Tabanidae (Diptera) in southern Ontario. I05

HAEMATOBIA IRRITANS
Color preference of the horn fly, Haematobia irritans, on beef cattle. 384

Rearing the horn fly, Haematobia irritans. 418

Laboratory tests to determine susceptibility of adult horn fly and stable fly to insecticides. 427

Resistance to ronnel in a strain of horn flies. 428

Some effects of gamma radiation on the horn fly. 492

Ultraviolet radiation as an attractant for adult horn flies. 528

The pH tolerance of horse fly larvae. 529

Variations in the color of eggs of the horn fly. 530

Laboratory propagation of the horn fly. 531

Laboratory technique for evaluating and detecting horn fly populations that are susceptible or tolerant to four insecticides by using a modified WHO test kit. 532

Influence of cattle diet on survival of horn fly larvae. 533

Face fly and horn fly control on cattle - 1962-1964. I337

Free choice feeding of ronnel mineral block and granules for face fly, horn fly, and cattle grub control. 1347

Field tests with low-level feeding of ronnel for control of cattle grubs and horn flies. 1394

Horn fly and face fly control studies with Dow M-1816. . I634

HAIR
Problems in naming the setae of Lepidopterous larvae. 139

The influence of parathion and para-oxon on sensory hairs of flies. 490

HAIRY ROOT (ROSA)
Hairy root of field roses. 907

HALF-LIFE
Half-life of effectiveness against stem rust of systemic chemicals in wheat seedlings. 727

HALOGENS
Identification of halogenated pesticides by mass spectroscopy. I504

The halogenated aliphatic acids. 1844

HAND SEEDER
Hand seeder adapted for precision planting or for application of granulated insecticides or fertilizers. I956

HARVESTING
Use of gibberellic acid in facilitating the mechanical harvesting of dwarf beans. 1734

HATCHING
Effect of ultrasonic waves on the hatching of Aedes aegypti eggs at a frequency of 0.5 megacycles per second. 576

HAWAII
Life-history studies of Myzus persicae in Hawaii. 652

Adsorption of several pre-emergence herbicides by Hawaiian sugar cane soils. I414

HEAD CAPSULE
The effects of the feeding of the potato leafhopper on photosynthesis and respiration in the potato plant. I757

HEAD SMUT (SORGHUM)
Races of head smut of sorghum. 724

HEAT
Temperatures lethal to the alfalfa weevil. 288

Production of heat during fermentation of cacao beans. 854

Heat inactivation of stone fruit ringspot virus. 922

Heat-induced abnormalities - a model disease. I724

HEATING
Deterioration of stored feedstuffs: Relation of interspace relative humidity to growth of molds and heating of feed ingredients and feed mixtures. I377

HEATING APPARATUS
A heating apparatus for conducting feeding experiments with blood-sucking mites. I895

HELIOTHIS VIRESCENS
Seasonal occurrence of Heliothis larvae on cotton in. 71

Dosage-mortality data on the bollworm, Hellothis zea, and the tobacco budworm, Heliothis virescens, in Oklahoma. 493

Bollworm and tobacco budworm resistance to some insecticides in lower rio grande valley in 1964. 502

The effects of various larval and adult diets on the fecundity and longevity of the bollworm, tobacco budworm, and cotton leafworm. 503

Behavior of Campoletis perdistinctus (Viereck) as a parasite of the tobacco budworm. 552

Investigations of the possibility of host specific strains of the bollworm and tobacco budworm in mississippi. 619

A method of host selection by cardiochiles nigriceps. 663

Cultural control of overwintering bollworm and tobacco budworm. III0

Relative seasonal abundance of bollworm and tobacco budworm larvae on cotton in Georgia. 1134

Comparison of insecticide application schedules for control of cotton insects. 1261

Cotton-plant pigment as a source of resistance to the bollworm and tobacco budworm. 1640

A paper-bag test cage for use with the tobacco budworm. 1906

HELIOTHIS ZEA
Seasonal occurrence of Heliothis larvae on cotton in. 71

Laboratory insecticide tests against the bollworm. 300

Techniques for rearing the corn earworm, Heliothis zea. 322

Insecticide tests on the corn earworm as a pest of lettuce in Arizona. 420

Dosage-mortality data on the bollworm, Heliothis zea, and the tobacco budworm, Heliothis virescens, in Oklahoma. 493

Bollworm and tobacco budworm resistance to some insecticides in lower rio grande valley in 1964. 502

The effects of various larval and adult diets on the fecundity and longevity of the bollworm, tobacco budworm, and cotton leafworm. 503

Corn earworm development in relation to temperature. 510

Investigations of the possibility of host specific strains of the bollworm and tobacco budworm in mississippi. 619

Rearing of the bollworm on artificial diet. 660

A sequential sampling plan for determining the status of corn earworm control in sweet corn. 684

Effect of the bollworm, Heliothis zea, on yield and quality of cotton. 1058

Methods of artificial infestation of corn with the earworm, Heliothis zea. 1071

Contents of corn silks in relation to corn earworm injury. 1105

Cultural control of overwintering bollworm and tobacco budworm. 1110

Relative seasonal abundance of bollworm and tobacco budworm larvae on cotton in Georgia. 1134

Methods of artificially infesting corn with the corn earworm and factors influencing resistance. 1151

Two wild host plants for the bollworm in Honduras. 1153

Resistance of experimental cotton strain 1514 to the bollworm and cotton fleahopper. 1170

Amino acid content of corn silks in relation to resistance to corn earworm. 1186

Parasitization of corn earworm eggs on sweet corn silk in Southern California, with notes on larval infestations and predators. 1198

Damage to corn by the pink scavenger caterpillar and its relationship to corn earworm and rice weevil damage. 1243

Effects of the boll weevil and bollworm on cotton quality. 1255

Comparison of insecticide application schedules for control of cotton insects. 1261

Comparative susceptibility of long- and short-staple cotton varieties to bollworm injury in Arizona. 1263

Field experiments with insecticides on cotton for control of the boll weevil, bollworm, and cotton leafworm in 1961. 1585

Cotton-plant pigment as a source of resistance to the bollworm and tobacco budworm. 1640

HELMINTHOSPORIA
Differentiation of oat Helminthosporia by the ragdoll method. 842

HELMINTHOSPORIUM
The relationship of conidial morphology and interspecific fertility in the genus Helminthosporium. 1780

HELMINTHOSPORIUM BLIGHT
Victoria-type resistance to crown rust separated from susceptibility to Helminthosporium blight in oats. 874

HELMINTHOSPORIUM CARBONUM
The inheritance of pathogenicity and mating type in crosses of Helminthosporium carbonum and Helminthosporium victoriae. 920

HELMINTHOSPORIUM DICTYOIDES
Helminthosporium Dictyoides and related species on forage grasses. 752

HELMINTHOSPORIUM GRAMINEUM
The Helminthosporium gramineum complex and related species on cereals and forage grasses. 751

HELMINTHOSPORIUM SATIVUM
Pathogenic specialization of Helminthosporium sativum. 728

Lesion type as a means of evaluating barley lines for resistance to Helminthosporium sativum. 776

The effect of nutrition on germination of conidia of Helminthosporium sativum in natural soil. 1727

HELMINTHOSPORIUM SPP.
Evolution of sexuality and pathogenicity. I. Interspecific crosses in the genus Helminthosporium. 918

HELMINTHOSPORIUM TURCICUM
Physiologic specialization in Helminthosporium turcicum. 947

HELMINTHOSPORIUM VAGANS
Conidial production from filter paper cultures of Helminthosporium vagans and Alternaria solani. 875

HELMINTHOSPORIUM VICTORIAE
Transmission of a disease of Helminthosporium victoriae. 865

Cochliobolus victoriae, the perfect stage of Helminthosporium victoriae. 917

The inheritance of pathogenicity and mating type in crosses of Helminthosporium carbonum and Helminthosporium victoriae. 920

Toxin production by Helminthosporium victoriae on synthetic media containing different nitrogen sources. 1725

HEMORRHAGE
The relationship between the hemorrhagic and lethal activities of japanese mamushi (Agkistrodon halys blomhoffii) venom. 1660

HEMPA
Hempa and apholate as chemosterilants for the boll weevil. 430

Laboratory techniques for evaluating hempa and other chemosterilants against the Mexican fruit fly. 518

Structure-activity relationships in analogs of tepa and hempa. 1568

HENDERSON-MCBURNIE MACHINE
Sampling mites on peach leaves with the Henderson-McBurnie machine. 1959

HEPTACHLOR
Resistance of the alfalfa weevil to heptachlor. 262

The effect of heptachlor and chlordane on the foraging activity of imported fire ants. 498

Heptachlor as a systemic insecticide against the wheat stem sawfly, Cephus cinctus Nort. 1135

Insecticide residue studies: The fate of heptachlor in the

HEPTACHLOR EPOXIDE

soil following granular application to the surface. 1428

Mechanisms of contamination of alfalfa with heptachlor and heptachlor epoxide. 1442

Translocation of DDT and heptachlor in soybeans. 1453

Insecticide residue studies: Determination of heptachlor and heptachlor epoxide in soils. 1506

The quantitative determination of heptachlor in pesticide formulations by gas chromatography. 1869

HEPTACHLOR EPOXIDE
Mechanisms of contamination of alfalfa with heptachlor and heptachlor epoxide. 1442

Residues of heptachlor epoxide and telodrin in milk from cows fed at part per billion insecticide levels. 1473

Insecticide residues in meat and milk: determination of heptachlor epoxide in fat and milk. 1501

Insecticide residue studies: Determination of heptachlor and heptachlor epoxide in soils. 1506

HERBICIDE RESIDUES
Determination of amiben in tomatoes by electron affinity gas chromatography. 1427

Herbicide residues: A colorimetric method for the determination of EPTC residues in crops and soils. 1430

Determination of micro amounts of isopropyl N-(3-chlorophenyl)carbamate.(CIPC) in milk and urine excreted from dairy cows. 1461

Herbicide residues: Improved extraction procedure for the determination of EPTC residues in potatoes. 1467

Determination of polychlorinated benzoic acid herbicide residues by gas chromatography. 1487

Herbicide residues: Colorimetric microdetermination of 1-chloro-2-nitrobenzene in pineapple. 1536

HERBICIDES
Relation of structure to phytotoxicity of s-triazine herbicides on cotton and weeds. 719

Use of herbicides to break the life cycle of the bentgrass nematode, Anguina agrostis (Steinbuck 1799) Filipjev 1936. 1278

Adsorption of several pre-emergence herbicides by Hawaiian sugar cane soils. 1414

Review of disappearance of substituted urea herbicides from soil. 1419

Herbicide residues:The determination of ethyl N,N-di-n-propylthiolcarbamate (EPTC) in soil by gas chromatography. 1478

Herbicide residues in milk:Form and magnitude of 2,2-dichloropropionic acid (dalapon) residues in milk. 1489

Herbicide determination:A new basic procedure for determining phenoxy acid herbicides in agricultural products. 1496

Herbicide toxicity:Mammalian toxicity of Sesone herbicide. 1565

Bark beetle mortality in trees injected with cacodylic acid (herbicide). 1570

Mode of action of dipyridyl quaternary salts as herbicides. 1620

Herbicide toxicology: Toxicology of dalapon sodium (2,2-dichloropropionic acid, sodium salt). 1670

Phytotoxicity of herbicides: Reduction of 3-amino-1,2,4-triazole phytotoxicity in tomato plants. 1701

Review of herbicide penetration through plant surfaces. 1739

Tolerance of several grass species to 2-Chloro-s-triazine herbicides in relation to degradation and content of benzoxazinone derivatives. 1744

Metabolism of alpha-chloro-N,N-diallylacetamide(CDAA) and 2-chloroallyl-N,N-diethyldithiocarbamate(CDEC) by plants. 1750

Degradation of 4-(2,4-dichlorophenoxy)-butyric acid (4-(2,4-DB)) in plants. 1766

Metabolism of triazine herbicides by plants. 1776

The metabolism of s-propyl-1-C14 n-butylethylthiocarbamate (Tillam-C14) in rats. 1826

Symposium on metabolism of herbicides. 1828

The halogenated aliphatic acids. 1844

Gas chromatography retention times and sensitivity data for insecticides and herbicides. 1880

HERRINGS
Chemical studies on the herring (Clupea harengus). XI Preliminary gas-chromatographic study of volatile sulphur compounds produced during the cooking of herring. 1479

HETERODERA GLYCINES
Evaluation of crops rotation and soil fumigation for controlling the soybean cyst nematode. 1289

The effect of soil temperatures on development of Heterodera glycines in soybeans. 1311

HETERODERA ROSTOCHIENSIS
The reactions of three golden nematode populations to resistant and susceptible potato selections. 1294

HETERODERA TRIFOLII
Heterodera trifolii, a foliage pathogen of white clover. 1310

HEXACHLORO-2-PROPANOL
Antisporulant action of hexachloro-2-propanol. 1749

HEXACHLORONAPHTHALENE
Toxic effects of hexachloronaphthalene on swine. 1624

HIBBERTIA SCANDENS
A virus disease of Hibbertia scandens. 797

HIBERNATION
Influence of moisture on winter survival of the pink bollworm. 69

Overwintering females and the number of generations of Typhlodromus (T.) pyri Scheuten (Acarina:Phytoseiidae) in Nova Scotia. 88

Effects of water levels on the overwintering survival and emergence of the larch sawfly in a bog habitat. 104

Studies on the ability of overwintered boll weevils to find fruiting cotton plants. 172

Patasson luna in overwintering eggs of the alfalfa weevil. 223

The relationship of the fruiting of the cotton plant and overwintered boll weevils to the F1 generation. 236

Infestation of overwintering nymphs of Chortophaga viridifasciata by mermithids. 299

Seasonal activity of buried overwintering pink bollworm larvae in central Texas. 379

Laboratory emergence of adults from overwintering pupae of the apple maggot, Rhagoletis pomonella (Walsh) (Diptera: Tephritidae). 635

Starvation method for obtaining diapausing boll weevils able to survive the winter in hibernation. 657

Overwintering in the egg stage by the spotted alfalfa aphid in Nebraska. 704

Egg deposition by boll weevils isolated from males during hibernation period and after spring emergence. 708

Cultural control of overwintering bollworm and tobacco budworm. 1110

The relationship between sprout inhibitors and overwintering of aphids on outdoor piles of cull potatoes. 1233

HIBISCUS
The sawfly Atomacera decepta, a pest of Hibiscus. 1250

HIRSUTELLA GIGANTEA PETCH
Nutritional studies on the genus Hirsutella: Iii. Acid-hydrolyzed casein and amino acid combinations as sources of nitrogen. 507

HISTOPATHOLOGY
A one-year study of the toxicity of ethambutol in dogs: results of gross and histopathologic examinations. 1564

HOJA BLANCA (RICE)
An improved method of selecting and breeding for active vectors of hoja blanca virus. 831

Hoja blanca transmission studies on rice. 889

HOLLY LEAF SPOT
A holly leaf spot associated with the use of copper fungicides. 1745

HOLOCYCLIC INSECTS
Holocyclic strain of the spotted alfalfa aphid in Nebraska and adjacent states. 141

HOMOGENIZATION
Experiments with homogenates of larvae of Trombicula splendens. 1333

HONDURAS
Two wild host plants for the bollworm in Honduras. 1153

HONEY
The stabilization of relative humidity with honey in closed systems. 287

HOOKER COMPOUND
Field tests of dichlorvos, General Chemical 4072, Hooker Compound, and synergized dDT against Musca domestica. 515

HOPS
A virus disease of hops, Humulus lupulus, in Washington. 996

The concentration of dimefox in air resulting from its use on hops. 1415

HORSES
Insecticide tests against the tropical horse tick, Dermacentor nitens, on horses. 1340

Field tests with insecticides for the control of ticks on livestock. 1341

HOST INDEXING (PLANTS)
Host specialization of dwarf mistletoe on red and white fir in California. 929

A virus of wide host range seed-borne in Phaseolus vulgaris. 995

Crambe: susceptibility to some plant viruses. 1797

HOST NUTRITION
The effect of host nutrition on the development of exocortis in Poncirus trifoliata. 1035

HOST PLANTS
Effect of temperature and host plants on progeny production of four biotypes of corn leaf aphid, Rhopalosiphum maidis. 610

Variation in maize seedling blight symptoms with changes in pathogen species, isolate and host genotype. 857

Two wild host plants for the bollworm in Honduras. 1153

Host plant preference of the six-spotted leafhopper. 1257

HOST RANGE
Host range, pathogenicity, and taxonomy of Ascochyta imperfecta. 796

Morphology and host range of a subterranean member of the Meliolaceae. 816

HOST RECORDS
A new host record for the seedworm Laspeyresia toreuta, with notes on its biology. 29

HOST SPECIFICITY
Studies of the host specificity of Verticillium albo-atrum var. menthae. 804

HOT SPOTS
Relationships of insects to hot spots in stored wheat. 1385

HOT WATER TREATMENT (NEMATODES)
The effect of hot water at different temperatures on larvae of various species of Meloidogyne. 1317

HOT WATER TREATMENT (PLANTS)
Tolerance of imported garlic bulbs to methyl bromide fumigation and hot-water dips. 1396

HOUSES
Identification and occurrence of cockroaches in dwellings and business establishments in North Carolina. 258

HULL ROT (PRUNUS AMYGDALUS)
The role of fumaric acid, a fungal toxin, involved in the hull rot disease of almond. 894

A quantitative method for determining fumaric acid, a toxin involved in the hull rot disease of almond. 895

HUMIDITY
The stabilization of relative humidity with honey in closed systems. 287

A comparison of the number of tropical rat mites and tropical fowl mites that fed under varying conditions of humidity. 345

The effects of temperature and moisture on development of black stem of alfalfa. 738

The effects of temperature and moisture on oak wilt development. 837

Effects of temperature and moisture stress on the lettuce powdery mildew fungus. 975

Effect of light and humidity on the absorption and translocation of dimethoate in the cotton plant. 1165

Effect of water solubility and soil moisture upon plant uptake of granulated systemic insecticides. 1218

Deterioration of stored feedstuffs: Relation of interspace relative humidity to growth of molds and heating of feed ingredients and feed mixtures. 1377

The effect of humidity on the volatization of certain insecticides. 1494

HYBRIDS
Citrus varieties, hybrids, species and relatives evaluated for resistance to the burrowing nematode, Radophus similis. 1292

HYDROCARBONS
The status of boll weevil resistance to chlorinated hydrocarbon insecticides in Texas. 308

Phytotoxicity of gas mixtures: Plant damage and eye irritation from ozone-hydrocarbon reactions. 1583

Translocation of some chlorinated hydrocarbon insecticides into the aerial parts of pea plants. 1761

HYDROGEN-ION CONCENTRATION
The pH tolerance of horse fly larvae. 529

The influence of pH on growth of Thielaviopsis basicola in culture and the development of Thielaviopsis root rots of poinsetta and bean in soil. 736

HYDROGENATION

Some effects of pH and milk on tobacco mosaic virus. 829

HYDROGENATION
Hydrogenation refining vs. efficiencies of spray oils against citrus red mite eggs and California red scale. 587

HYDROLYSIS
The occurrence of a variety of enzymes hydrolyzing cell wall polysaccharides in apples rotted by Botryosphaeria ribis. 883

HYDROSTATICS
Improved hydrostatic pressure gauge methods for measuring oleoresin exudation pressure in bark beetle research. 1871

HYDROXY LECITHIN
Hydroxy Lecithin emulsions for treating insects. 499

HYDROXYL
The hydroxylation of naphthalene-1-C14 by house fly microsomes. 1809

HYDROXYPYPIDINETHIONE.
Toxicology of hydroxypyridinethione. 1653

HYLEMYA ANTIQUA
Sterilization of onion maggots by irradiation with cesium-137. 517

The response of Hylemya antiqua adults to hydrolized proteins and other materials: a laboratory study. 550

Mass rearing of the onion maggot, hylemya antiqua, under laboratory conditions. 551

Development of resistance to insecticides by the onion maggot, Hylemya antiqua, in Minnesota. 561

Evaluation of several insecticides to control the onion maggot. 1677

HYLEMYA BRASSICAE
Establishing and maintaining a culture of Hylemia brassicae (Bouche) Diptera:Anthomyiidae) in the greenhouse or laboratory. 187

Mass rearing of the cabbage maggot under controlled environmental conditions, with observations on the biology of Cyclodiene-susceptible and resisting strains. 424

Methods of testing Hylemya root maggots for insecticide resistance. 579

Effects of temperature on hatching and on longevity on starved first-instar larvae of Hylemya brassicae (Bouche) (Diptera: Anthomyiidae). 639

Sterilization of the cabbage maggot with apholate. 640

Oviposition preference of the cabbage maggot, Hylemya brassicae (Bouche). 698

HYLOBIUS RADICIS
The pine root-collar weevil, Hylobius radicis Buch., in southern Ontario. 58

Control of the pine root collar weevil, Hylobius radicis. 1112

HYLURGOPINUS RUFIPES
Twig feeding by the smaller European elm bark beetle on different kinds of trees. 1070

Evaluation of insecticides for control of the smaller European elm bark beetle. 1098

HYMENOPTERA
The circumstances of species replacement among parasitic Hymenoptra. 60

Methods for placing wasp trap nests in elevated locations. 1908

HYPERA POSTICA
Status of the alfalfa weevil biological control program in the eastern United States. 34

The alfalfa weevil parasite Bathyplectes curculionis in Illinois and notes on its dispersal. 49

Studies on the feeding behavior of alfalfa weevil adults from the eastern and western united states. 119

Hymenopterous parasites of the alfalfa weevil, Hypera postica, in New York. 178

Biological notes on some hyperparasites of Bathyplectes curculionis (Thomson). 182

Patasson luna in overwintering eggs of the alfalfa weevil. 223

Resistance of the alfalfa weevil to heptachlor. 262

Temperatures lethal to the alfalfa weevil. 288

Lipid content of the alfalfa weevil as related to seasonal activity. 291

Sterilization of the male alfalfa weevil (Hypera postica: Curculionidae) by x-radiation. 315

An entomogenous fungus observed attacking alfalfa weevil adults in New York. 340

Influence of cold storage on the viability of alfalfa weevil eggs and feeding ability of hatching larvae. 341

Alfalfa weevil control studies in West Virginia. 365

Evaluation of five artificial diets for the laboratory rearing of alfalfa weevil larvae. 545

Flight habits of the alfalfa weevil in New York. 566

Effect of spray volume and pressure on the control of larvae of the alfalfa weevil, Hypera postica, with conventional spray equipment. 630

Factors affecting resistance of alfalfa clones to adult feeding and oviposition of the alfalfa weevil in the laboratory. 661

Improved technique for rearing the alfalfa weevil, Hypera postica (Gyllenhal), in the laboratory. 696

Spring applications of insecticides for control of alfalfa weevil in Alabama. 1068

Field tests with new insecticides for control of alfafa weevil larvae in western Neraska. 1604

An improved method for storage of the alfalfa weevil in the laboratory. 1888

HYPERKERATOSIS
Toxic effects of hexachloronaphthalene on swine. 1624

HYPERPARASITISM
Hyperparasitism, a mutualistic phenomenon. 59

Biological notes on some hyperparasites of Bathyplectes curculionis (Thomson). 182

HYPHANTRIA CUNEA
Synonymy and color variation in the fall webworm, Hyphantria cunea Drury (Lepidoptera : Arctiidae). 154

The effect of predator age and prey defense on the functional response of Podisus maculiventris Say to the density of Hyphantria cunea Drury. 156

Studies on the biological control of the fall webworm, Hyphantria cunea, in Louisiana. 168

HYPODERMA
Anticholinesterases in blood and cattle grubs from cattle treated with ronnel. 445

Development of cattle grubs in Oklahoma cattle imported into Canada. 668

Small-scale field tests in Texas with six systemic insecticides for the control of cattle grubs. 1104

Effects of certain systemic insecticides in backrubbers for cattle grub control. 1328

Cattle grub control by the addition of a systemic insecticide to drinking water. 1336

Low-volume dermal applications and injections of Co-Ral for systemic control of cattle grubs. 1338

Control of cattle grubs by pour-on, injection, and spray. 1351

Cattle grub control with ruelene as a dip and a pour-on treatment. 1357

Field tests with low-level feeding of ronnel for control of cattle grubs and horn flies. 1394

Further evaluation of animal systemic insecticides, 1962. 1591

HYPODERMA LINEATA
Area population control of heel flies by Ruelene pour-on application annually to cattle. 1355

HYPOXYLON PRUINATUM
Bacteria in the perithecia of Hypoxylon pruinatum and their effect on ascospore germination and colony development. 1048

ICHTHYOTOXIN
Observations on the mechanism of action and on the quantitative assay of ichthyotoxin from Prymnesium parvum Carter. 1813

IDAHO
Green peach aphid distribution and potato leafroll virus occurrence in the seed-potato producing areas of Idaho. 744

The amount of Verticillium albo-atrum in Idaho certified. potato seed. 823

Insects destructive to bitterbrush flowers and seeds in southwestern Idaho. 1109

IGEPAL
Control of the alfalfa weevil, Hypera postica, in N.Y. 1064

ILEX OPACA
Control of the native holly leaf miner, Phytomyza ilicicola (Diptera: Agromyzidae). 1158

ILLINOIS
The alfalfa weevil parasite Bathyplectes curculionis in Illinois and notes on its dispersal. 49

IMIDAN
Rates of disappearance of zolone and imidan from alfalfa. 1518

A study of the dermal treatment of a steer with C14-labeled Imidan. 1567

IMMUNIZATION
Cross-inoculation of tomato and corn with Gibberella. 748

The response of corn to inoculation with Diplodia zeae and Gibberella zeae. 802

Rapid screening of alfalfa for resistance to Corynebacterium insidiosum by inoculating petioles. 819

Leaf enations in apple inoculated from cherry. 869

Occurrence of Verticillium wilt on peanuts. 998

Blister rust fungus inoculations on white pines in mist chambers. 1024

Growth of apple seedlings in relation to soil temperature and inoculation with Pratylenchus penetrans. 1303

A simple and inexpensive tractor-mounted inoculum applicator* 1969

IMPIETRATURA
On the impietratura of grapefruit. 957

IMPLANTATION
A spray technique for implanting boll weevil eggs on artificial diets. 389

IMPORTED PRODUCE
Tolerance of some imported vegetables to methyl bromide fumigation and hot water treatments. 721

INCLUSION BODIES
Serological relationships between insect viruses and their inclusion-body proteins. 481

INCUBATION
The effects of position on hatching of honey bee eggs in the laboratory. 356

INCUBATION PERIOD
Extension of the incubation period of southwestern corn borer eggs by refrigeration. 636

INDIA
Presence of seedling yellows complex in the citrus of South India. 766

The role of new insecticides for control of rice stem borer in Orissa. 1232

INDIANA
Field infestation of corn in Indiana by the Angoumois grain moth and a rice weevil. 1223

INFECTIVITY DILUTION CURVE
On the infectivity dilution curve of plant viruses. 986

INFESTATION
Some new infestations of the balsam woolly aphid in North Carolina, with possible modes of dispersal. 1063

INFRARED PHOTOGRAPHY
Mechanics of infrared cinematography in studies with the european corn borer. 1974

INFRARED SPECTRA
The estimation of mixtures of DDT and BHC isomers using infrared differential null-analysis. 1821

INHERITANCE
Inheritance of resistance to DDT in Blattella germanica. 336

Inheritance and linkage studies of a derived Victoria-type crown rust resistance and Victoria blight. 873

Inheritance of 5 genes conditioning pathogenicity in Erysiphe graminis f. sp. hordei on barley. 901

INJECTIONS
Transmission of barley yellow dwarf virus to oats by aphids made viruliferous by needle injection. 905

Control of cattle grubs by pour-on, injection, and spray. 1351

INJURIES
Variations in leaf miner and flea beetle injuries in tomato varieties. 1274

INOCULATIVE FREEZING
Delayed inoculative freezing of insects. 592

INOCULUM
The source of inoculum for bacterial canker and blast of stone fruit trees. 799

Production of new races of Puccinia graminis var. tritici by tissue transplants. 810

The survival of Verticillium albo-atrum in muck soils. 1411

INOCULUM APPLICATOR
A simple and inexpensive tractor-mounted inoculum applicator* 1969

INOSITOL
Failure of myo-inositol to prevent the growth-inhibiting effects of lindane in Periplaneta americana. 383

INSECT ADAPTATION

INSECT ADAPTATION
Evolution and adaptation of larval characters in the Tortricidae. 138

INSECT ADULTS
Availability of dieldrin to adult Blissus leucopterus and larval Cyclocephala immaculata in treated sand, loam, and muck soils. 1418

INSECT ANATOMY
Larval descriptions of Zelraphera pacifica Freeman and Epinotia hopkinsana (Kearfott) (Lepidoptera: Olethreutidae). 35

The caudal appendage of final-instar larvae of some Porizontinae (Hymenoptera: Ichneumonidae). 57

INSECT BEHAVIOR
Observations of puncturing and oviposition behavior of boll weevils. 54

Studies on the feeding behavior of alfalfa weevil adults from the eastern and western united states. 119

The life history and habits of Scolytus unispinosus Leconte (Coleoptera: Scolytidae) in the interior of britlsh Columbia. 148

The European praying mantis (Mantis religiosa L.) as a predator of the red-legged grasshopper (Melanoplus femurrubrum) (De Geer). 152

Field studies on attack flight and log selection by the ambrosia beetle Trypodendron lineatum (Oliv.) (Coleoptera: Scolytidae). 331

Life history and habits of the green spruce leaf miner, Epinotia nanana (Treitschke) (Lepidoptera: Tortricidae). 352

Mating behavior of the oriental fruit moth, Grapholitha molesta (Busck) (Lepidoptera: Olethreutidae). 368

Influence of repellency on the efficacy of blatticides I. Learned modifications of behavior of the German cockroach. 370

Feeding and ovlposition reaction of boll weevils to cotton, althea, and okra flower buds. 376

Further studies on the food-gathering behaviour of bumble bees (Hymenoptera: Apidae). 440

A description of territorial behavior and a quantitative study of its function in males of Hetaerina americana (Fabricius) (Odonata: Agrlidae). 454

Face fly dispersal, nocturnal resting places, and activity during sunset as observed in 1963. 471

The development and habits of the granary weevil, Sitophilus granarius within the kernel of wheat. 472

The behavior of the adult of Aphodius tasmaniae Hope (Col., Scarabaeidae) in south Australia. 508

Biology and ecology of the garden chafer, Phyllopertha horticola (L.).VII. the flight season: male and female behaviour, and concluding discussion. 525

Behavior of Campoletis perdistinctus (Viereck) as a parasite of the tobacco budworm. 552

Mating studies of the pink bollworm. 556

Flight habits of the alfalfa weevil in New York. 566

The biology and behaviour of the European pine shoot moth Rhyacionia buoliana (Schiff.), in southern Ontario. II. Eggs, larva, and pupa. 567

Life-history and behaviour of the predacious mite Typhlodromus (T.) caudiglans Schuster (Acarina: Phytoseiidae) in Ontario, with notes on the prey of related species. 570

Biology of the mountain pine beetle, Dendroctonus monticolae Hopkins, in the East Kootenay region of British Columbia II. Behaviour in the host, fecundity, and internal changes in the female. 583

Sexual behavior in blister beetle (Coleoptera: Meloidae) I. The genus Pyrota. 599

A note on the longevity and behaviour of adult golden buprestids, Buprestis aurulenta L. (Coleoptera: Buprestidae under artificial conditions. 614

Crossbreeding studies with seven species of Trogoderma. 637

A marking and recovery method for use in boll weevil movement studies. 641

Emergence pattern of first-generation boll weevils in an isolated plot during 1960 and 1961. 665

Biological activities of the harvester ant, Pogonomyrmex owyheei, in central Oregon. 679

Life history, habits, and damage of the boxelder leaf gall midge, Contarinia negundifolia Felt (Diptera: Cecidomyiidae) in Michigan. 680

Behavior and control of the grape mealybug on pear. 1173

The damage control of climbing cutworms in commercial fields of lowbush blueberry. 1277

A versatile alternative chamber for insect behaviour studies. 1873

INSECT BIOLOGY
Observations on the effectiveness and biology of the European predator Laricobius erichsonnii rosen (Coleoptera:Derodontidae) in Oregon and Washington. 19

A new host record for the seedworm Laspeyresia toreuta, with notes on its biology. 29

The biology of Pineus similis (Gill.) (Homoptera: Phylloxeridae) on spruce. 39

Notes on the ecology and biology of the corn root webworm. 44

A biological and ecological study of the rice pentatomid bug dept. of agriculture, peradeniya, ceylon Scotinophara lurida (Burm.) in.Ceylon. 56

The biology of the mountain-ash sawfly, Pristiphora geniculata (Htg.) (Hymenoptera: Tenthredinidae), in eastern Canada. 61

The biology of two species of mosquito, Mansonia africana (Theobald) and Mansonia uniformis (Theobald), belonging to the subgenus Mansonioides (DipterA, culicidae). 123

The control of black sage (Cordia macrostachya) in Mauritius: the introduction, biology and bionomics of a. species of Eurytoma (Hymenoptera, Chalcidoidea). 249

The biology of the boll weevil in relation to cotton type. 297

Zimmerman pine moth biology and control. 320

The biology and control of the western bean cutworm in dent corn in Nebraska. 412

Mass rearing of the cabbage maggot under controlled environmental conditions, with observations on the biology of Cyclodiene-susceptible and resisting strains. 424

A comparative study of certain biological phenomena detected in a parathion-treated strain and a susceptible strain of the plum curculio, Conotrachelus nenuphar. 431

Biological observations on the european corn borer in southeastern missouri. 449

Hydroxy Lecithin emulsions for treating insects. 499

Preliminary observations on the biology of Folsomia candida Willem, 1902 (Collembola: Isotomidae. 512

Biology and ecology of the garden chafer, Phyllopertha horticola (L.).VII. the flight season: male and female behaviour, and concluding discussion. 525

The biology and behaviour of the European pine shoot moth Rhyacionia buoliana (Schiff.), in southern Ontario. II. Eggs, larva, and pupa. 567

Biology of mountain pine beetle, Dendroctonus monticuiae Hopkins, in the East Kootenay Region of British Columbia.I. Life cycle, brood development, and flight periods. 582

Biology of the mountain pine beetle, Dendroctonus monticolae Hopkins, in the East Kootenay region of British Columbia II. Behaviour in the host, fecundity, and internal changes in the female. 583

Observations on the biology and cultural-insecticidal control of Prosapia bicincta, a spittlebug, on coastal bermudagrass. 1069

Biology of the pink scavenger caterpillar and its control in corn. 1103

Biology of the banded cucumber beetle, Diabrotica balteata, in Louisiana. 1205

INSECT CAGES

Observations on the life history of the desert grasshopper (Trimerotropis pallidipennis pallidipennis) in laboratory and insectary cages. 284

Observations on emergence and life-span of wheat bulb fly, Leptohylemyia coarctata (Fall.) ditions. 361

A cage to contain small insects during pollination studies. 589

Results of cage experiments with sterile male releases and a chemosterilant technique for control of cabbage looper populations. 1623

A versatile alternative chamber for insect behaviour studies* 1873

A cage for collecting insects from tree stems and branches. 1904

Simplified methods for laboratory maintenance of saltatory Orthoptera. 1907

A small cage for the collection of insect excreta. 1914

A metal cage for rearing grasshoppers. 1947

An expandable cage for feeding tests of coccinellid predators of aphids. 1954

An economical method of maintaining adult diptera. 1957

A holding cage and handling device for noctuid moths. 1972

INSECT COLLECTING EQUIPMENT

Collection of additional sex attractant from the virgin female introduced pine sawfly. 456

Flight habits of the alfalfa weevil in New York. 566

Relationship of Lepidoptera light-trap collections to cotton field infestations. 1200

A portable apparatus for separating fly larvae from poultry droppings. 1881

An insect flight trap for crop areas. 1887

Apparatus and procedure for separation of corn rootworm eggs from soil. 1891

A cage for collecting insects from tree stems and branches. 1904

Improved method of using yellow-pan aphid traps. 1905

A paper-bag test cage for use with the tobacco budworm. 1906

A fan for handling live insects. 1918

An inexpensive portable suction insect sampler. 1919

Trap for separating collections of insects by interval. 1929

An automatic sample-changing device for light-trap collecting. 1933

A modified aspirator for collecting small arthropods. 1945

A storage method for collections of insects in liquid. 1977

Effect of bait-trap color on attractancy to Drosophila melanogaster. 1983

A portable electrically operated collecting device. 1984

Equipment for trapping and rearing the American cockroach, Periplaneta americana. 1985

A portable device for mass-collecting or sampling foliage-inhabiting arthropods. 1987

Modification of a vacuum cleaner for capturing German and brown-banded cockroaches. 1989

INSECT COLOR

A genetic factor controlling color and its association with dDT sensitivity in the cabbage looper. 705

INSECT COMPETITION

Competition between two species of mites. I. Experimental results. 382

INSECT CONTROL

Experiments on control of the alfalfa seed chalcid, Bruchophagus roddi, in seed alfalfa. 273

Studies of dimethoate for control of California red scale. 343

Face fly control studies in West Virginia in 1960-1961. 364

Alfalfa weevil control studies in West Virginia. 365

Control of a corn stem weevil (Hyperodes humilis), and fall armyworm with DDT and parathion in South Florida. 423

Effectiveness of insecticides in soil against termites after 15 years. 438

Notes on and control of stink bugs affecting cotton in arizona. 670

Comparison of aerial spray and dust insecticide applications for the control of cotton insects in Arizona. 671

Potentialities and progress in the development of chemosterilants for insect control. 702

Damage to safflower plants by thrips and lygus bugs and a study of their control. 1081

Control of the black vine weevil on concord grapes in central Washington. 1086

A method and machine for detecting living internal insect infestation in wheat. 1096

Evaluation of insecticides for control of the smaller European elm bark beetle. 1098

Biology of the pink scavenger caterpillar and its control in corn. 1103

Control of the pine root collar weevil, Hyloblus radicis. 1112

Granulated insecticides for control of some corn pests. 1129

Field insecticide screening tests against the corn flea beetle. 1131

Control of lawn moths in southern california. 1147

Developments in control of the grape mealybug. 1149

Natural control of the eastern tent caterpillar and notes on

INSECT CULTURES

its status as a forest pest. 1157

Foliage-feeding Lepidoptera on young nonbearing apple trees in Wisconsin. 1161

Comparison of soil surface treatments of some fumigants and soil insecticides for apple maggot control. 1179

Insecticide tests against thrips on cotton. 1201

Evaluation of the effectiveness of certain insecticides for control of the vetch bruchid. 1216

Evaluation of systemic insecticides for cotton insect control. 1219

Tests of systemics for control of birch leaf miner. 1229

Insecticide and microbial dusts and application intervals for control of lettuce insects. 1231

Experiment on alfalfa insect control in Maryland. 1245

Field-plot tests of chemicals for wheat stem sawfly control. 1256

Seasonal distribution of drosophilid flies in Beltsville, Maryland, tomato fields. 1262

Low-volume concentrate sprays applied by aircraft for control of the cereal leaf beetle. 1267

Tolerance of avocados to ethylene chlorobromide and ethylene dibromide dipping and fumigation. 1273

Low-volume dermal applications and injections of Co-Ral for systemic control of cattle grubs. 1338

Control of cattle grubs by pour-on, injection, and spray. 1351

Further tests with power dusting to control the sheep ked. 1353

Area population control of heel flies by Ruelene pour-on application annually to cattle. 1355

Fly control in feces from cattle fed Co-ral. 1360

Experiments for control of the face fly in Virginia. 1363

Systemic insecticides to control greenbugs on spring planted barley. 1382

Phorate and demeton for control of the pea leaf miner on sugarbeets. 1383

Chemical control of periodical cicada, Magicicada septendecim, on apples in North Carolina. 1401

Evaluation of three alternative insecticides for control of grasshoppers in Alberta. 1619

Preliminary tests with insecticides for the control of the little blue cattle louse. 1682

Tests with dichlorvos vapors for the control of mushroom flies. 1696

The fumigant toxicity of two new chemicals to stored-product insects. 1697

Field and laboratory studies on control of currant borer. 1702

Dusting stations and cable backrubbers as self-applicatory devices for control of the face fly. 1915

Mathematical models for use in insect pest control. 1981

INSECT CULTURES

The importance of timing in adult grasshopper surveys. 50

INSECT CYTOLOGY

Further cytological and cytochemical studies on the insect vector of aster yellows virus. 866

INSECT DEMOGRAPHY

Population dynamics of spider mites influenced by DDT. . 8

A field study of diapause, diapause control, and population dynamics of the boll weevil. 129

INSECT DISEASES

Control of four diseases of laboratory-reared boll weevils. 65

Potential bacterial pathogens of insects and their characteristics. 312

The duration of viability and infectivity of certain insect pathogens. 626

A vehicle-mountable rotary-tube sprayer. 1875

INSECT DISSEMINATION

Flight and dispersal of the European shoot moth, Rhyacionia buoliana (Schiff.) I. Factors affecting flight and the flight potential of females. 72

Flight and dispersal of the European pine shoot moth, Rhyacionia buoliana (Schiff.) II. Natural dispersal of egg-laden females. 73

Local distribution of released laboratory-reared screw-worm flies in relation to water sources. 90

Face fly dispersal, nocturnal resting places, and activity during sunset as observed in 1963. 471

Dispersal of three species of coccinellids in corn fields. 1108

INSECT ECOLOGY

Notes on the ecology and biology of the corn root webworm. 44

Studies on the bionomics of the jute stem girdler, Nupserha bicolor postbrunnea Dutt (Col., Camiidae). 48

A biological and ecological study of the rice pentatomid bug dept. of agriculture, peradeniya, ceylon Scotinophara lurida (Burm.) in.Ceylon. 56

The life history and ecology of the woolly pine needle aphid Schizolachnus pini-radiatae (Davidson) (Homoptera: Aphidae). 74

Seasonal and geographical distribution of Tabanidae (Diptera) in Manitoba, based on females captured in traps. 77

Nocturnal resting places of the screw-worm fly. 89

Ecology of species of Bombus Latr. (Hymenoptera: apidae) in southern Alberta. I. Subgenus Alpinobombus Skor. 92

Pupation sites of the eye-spotted bud moth, Spilonota ocellana and differences in degree of development on two apple varieties in Wisconsin. 124

The insect ecology of red pine plantations in central Ontario. II. Life history and control of Curculionidae. 142

History of larch sawfly outbreaks and their effect on tamarack stands in Manitoba and Saskatchewan. 158

Bionomics of the destructive prune worm, Mineola scituiella, on sour cherry in Wisconsin. 163

Orchard insect surveys with blacklight traps. 164

Additional studies on the bionomics of the eye-spotted bud moth, Spilonota ocellana, on sour cherry in Wisconsin. 166

A sampling technique for population and mortality factors of the fruit-tree leaf roller, Archips argyrospilus (Wlk.) (Lepidoptera: Tortricidae), on apples in Quebec. 170

Biology and ecology of the garden chafer, Phyllopertha horticola (L.).VII. the flight season: male and female behaviour, and concluding discussion. 525

An ecological basis for the suppression of hippelates eye gnats. 714

Mathematical models for use in insect pest control. 1981

INSECT EGG HATCHING
The effect of physio-chemical treatments on diapausing eggs of northern corn rootworms, Diabrotica longicornis. 348

INSECT EGGS
Determining trends in western spruce budworm egg populations. 18

Adult boll weevils and eggs marked with dye fed in larval diet. 66

Flight and dispersal of the European pine shoot moth, Rhyacionia buoliana (Schiff.) II. Natural dispersal of egg-laden females. 73

Population and mortality assessment during the egg and larval stages of the larch sawfly, Pristiphora erichsonii (Hgt.). 102

The effect of aggregation on egg and larval survival in Neodiprion swainei Midd. (Hymenoptera: Diprionidae). 132

Patasson luna in overwintering eggs of the alfalfa weevil. 223

Site of spruce budworm egg masses on their preferred hosts in the Lake States. 252

Survival of northern corn rootworm eggs through one and two winters. 332

A spray technique for implanting boll weevil eggs on artificial diets. 389

The effects of different plant foods on the fecundity, fertility, and development of a cotton stainer, Dysdercus superstitiosus (F.). 390

Effects of gamma radiation on codling moth eggs. 447

Egg mortality after gamma irradiation of adults of the omnivorous leaf roller. 448

Diapause in eggs of the pale western cutworm Agrotis orthogonia Morr. (Lepidoptera: Noctuidae). 451

The effects of 5-fluorouracil on the viability of house fly eggs. 468

Effects of cold storage on egg viability of the cabbage looper and some aspects of the biology of the progeny survivors. 475

Variations in the color of eggs of the horn fly. 530

Surface sterilization of eggs of the boll weevil with cupric sulfate. 549

Water and food relationship of the eggs and first instar nymph of Eurygaster integriceps with the aid of P32. 574

Effect of ultrasonic waves on the hatching of Aedes aegypti eggs at a frequency of 0.5 megacycles per second. 576

Hydrogenation refining vs. efficiencies of spray oils against citrus red mite eggs and California red scale. 587

Eggs and oviposition sites of some predacious mirids on apple trees (Miridae: Hemiptera). 593

Ovarioles and developing eggs in grasshoppers. 613

Extension of the incubation period of southwestern corn borer eggs by refrigeration. 636

Effects of temperature and moisture on survival of eggs of the tobacco wireworm. 656

Effect of Trichogramma releases on parasitism of sugarcane borer eggs. 1077

Parasitization of corn earworm eggs on sweet corn silk in Southern California, with notes on larval infestations and predators. 1198

Biology of the banded cucumber beetle, Diabrotica balteata, in Louisiana. 1205

Toxicity of some pesticides to eggs, larvae, and adults of the green lacewing, Chrysopa carnea. 1549

Effects of some chemosterilants on the viability of eggs, fecundity, mortality, and mating of the cabbage looper. 1615

The effects of various chemicals on eggs of the yellow-fever mosquito, Aedes aegypti. 1631

Effects of chemicals on European corn borer eggs. 1710

The relation between uptake and toxicity of organophosphates for eggs of the large milkweed bug. 1718

Flotation technique for extracting eggs of Diabrotica spp. and other organisms from soil. 1944

Apparatus for studying feeding and oviposition by Angoumois grain moth adults. 1949

Artificial egging receptacles for three species of Tephritid flies. 1976

INSECT EMBRYOS
Effects of tepa on the reproductive organs and embryogeny of the german cockroach. 617

INSECT EMERGENCE
Reliability of trapping in determining the emergence period and sex ratio of the sugar-beet root maggot Tetanops myopaeformis (Roder) (Diptera:Otitidae). 83

Emergence and flight of click beetles (Coleoptera: Elateridae) in organic soils of southwestern Quebec. 122

Laboratory emergence of adults from overwintering pupae of the apple maggot, Rhagoletis pomonella (Walsh) (Diptera: Tephritidae). 635

INSECT ERADICATION
Oriental fruit fly eradication by male annihilation. 634

INSECT EVOLUTION
The circumstances of species replacement among parasitic Hymenoptra. 60

Evolution and adaptation of larval characters in the Tortricidae. 138

INSECT FEEDING
Feeding and reproduction of some stored-product mites on seed-borne fungi. 611

Factors affecting resistance of alfalfa clones to adult feeding and oviposition of the alfalfa weevil in the laboratory. 661

INSECT FERTILITY
Development, survival and fecundity of the potato aphid Macrosiphum euphorbiae (Thomas), at constant temperatures. 281

INSECT FLIGHT
A contribution to the knowledge of flight muscle changes in the Scolytidae (Coleoptera). 7

Seasonal flights of insect vectors of several plant viruses in southern Arizona. 38

Flight and dispersal of the European shoot moth, Rhyacionia buoliana (Schiff.) I. Factors affecting flight and the flight potential of females. 72

Flight and dispersal of the European pine shoot moth, Rhyacionia buoliana (Schiff.) II. Natural dispersal of egg-laden females. 73

Emergence and flight of click beetles (Coleoptera: Elateridae) in organic soils of southwestern Quebec. 122

Field studies on flight patterns and olfactory responses of ambrosia beetles in Douglas-fir forests of western Oregon. 201

Field studies on attack flight and log selection by the ambrosia beetle Trypodendron lineatum (Oliv.) (Coleoptera: Scolytidae). 331

INSECT FLIGHT CHAMBER

Studies in mosquito repeliency. Iii. flight posture. 386

The olfactory guidance of flying insects. III. A technique for observing and recording flight paths. 465

Biology of mountain pine beetle, Dendroctonus monticulae Hopkins, in the East Kootenay Region of British Columbia.I. Life cycle, brood development, and flight periods. 582

An apparatus for continuously recording aphid flights from their hosts. 1899

INSECT FLIGHT CHAMBER
An aphid flight chamber: Construction and operation. 1936

INSECT FOOD
Natural source of food of the apple maggot. 240

INSECT GENETICS
The sex ratios in Ips triden Mannerheim (Coleoptera: Scolytidae). 96

The relationship of the fruiting of the cotton plant and overwintered boll weevils to the F1 generation. 236

Two genetic markers for larvae of the screw-worm fly. 699

A genetic factor controlling color and its association with dDT sensitivity in the cabbage looper. 705

INSECT GROWTH INHIBITORS
Growth inhibition of the house cricket with ethylene. 371

2-Imidazolidinone as an insect growth inhibitor and chemosterilant. 608

INSECT HOSTS
Some effects of host age on parasitism by Nasonia vitripennis (Walk.) (Hymenoptera: Pteromalidae). 259

The status of Tiphia vernalis Rohwer, a parasite of the Japanese Beetle, in Southern New Jersey and Southeastern Pennsylvania in 1963. 484

Sesame: a new host for tobacco budworm and bollworm. 1220

Control of the nematode Leidynema appendiculata (Leidy) (Nemata: Rhabditida Thelastomatidae) in laboratory cultures of the American cockroach. 1668

INSECT IDENTIFICATION
Mass marking boll weevil field populations. 42

Adult boll weevils and eggs marked with dye fed in larval diet. 66

New species and keys to the species of Ablautus Loew and Omniablautus Pritchard (Diptera: Asilidae). 245

Color chart for marking insects. 1896

INSECT INFESTATION
Predicting the size of European corn borer infestations (Ostrinia nubilalis Hbn.). 9

The infestation of Canadian produce inspected in United Kingdom ports between 1953 and 1959. 1140

INSECT MARKING
A marking and recovery method for use in boll weevil movement studies. 641

INSECT MATING
Failure of the grasshoppers Melanoplus bilituratus and Melanoplus confusus to cross-mate in confinement. 298

INSECT METABOLISM
Absoption and metabolism of Ruelene by arthropods. 305

Absorption and metabolism of C14-labeled DDT by DDT-susceptible and DDT-RESISTANT pink bollworm adults. 314

Separation and purification of DDT -degrading enzymes from the human body louse. 524

The enzymatic in vitro degradation of DDT by susceptible and DDT - resistant body lice. 560

Metabolism of methaphoxide in mosquitoes, house flies, and mice. 565

Mammalian and insect metabolism of the chemosterilant Thiotepa. 1666

Metabolism of insecticides by various insect species. 1671

INSECT MIGRATION
Spring migration of the six-spotted leafhopper in the Western Great Plains. 667

Migration of beet armyworm larvae. 672

INSECT MORPHOLOGY
A contribution to the knowledge of flight muscle changes in the Scolytidae (Coleoptera). 7

An annotated list of the Hippodamiini of Northern America with a key to the genera (Coleoptera: Coccinellidae). 15

A revision of the Platypalpus juvenis complex in North America (Diptera: Empididae). 28

Larval descriptions of Zeiraphera pacifica Freeman and Epinotia hopkinsana (Kearfott) (Lepidoptera: Olethreutidae). 35

Larval habitats, development, and parasites of some Tabanidae (Diptera) in southern Ontario. 105

A revision of the genus Campichoeta Macquart (Diptera: diastatidae). 144

Description of the immature stages of Pulvinaria vitis (L) and P. innumerabilis (Rathvon) (Homoptera: Coccoidea), with notes on the habits of these species in Ontario, Canada. 174

Some sexual differences in the granary weevil Sitophilus granarius (L.). 183

On the stages in the development of Syntomosphyrum albiclavus Kerrich (Hym., Gulophidae), a parasite of tsetse flies. 202

A new species of Dolichopus from North carolina (Diptera: Dolichopodidae). 235

Laboratory and field investigations of the effect of temperature on the development of Neodiprion sertifer (Geoff.) in the cocoon. 237

The external morphology of the adults and ultimate larval instar of the larch sawfly, Pristiphora erichsonii (Htg.) (Hymenoptera: Tenthredinidae). 254

Five new species of the caddisfly Polycentropus from South America (Trichoptera: Polycentropodidae). 260

Development, survival and fecundity of the potato aphid Macrosiphum euphorbiae (Thomas), at constant temperatures. 281

Comparative morphology of some Chrysobothris larvae (Coleoptera: Buprestidae) of eastern Canada. 292

The effect of temperature on the consumption of fat during pupal development in Glossina. 319

Observations on emergence and life-span of wheat bulb fly, Leptohylemyia coarctata (Fall.) ditions. 361

Description and life history of Melanolophia imitata (Walker) (Lepidoptera: Geometridae. 375

The effects of different plant foods on the fecundity, fertility, and development of a cotton stainer, Dysdercus superstitiosus (F.). 390

A pre-diapause arrested development period in the red-banded leaf roller, Argyrotaenia velutinana. 398

The development and habits of the granary weevil, Sitophilus granarius within the kernel of wheat. 472

Additional larvae of the North American Diethreutinae (1) (Lepidoptera: Tortricidae). 506

The effects of acaricides on the developmental stages of the two-spotted spider mite, Tetranychus telarius. 509

Preliminary observations on the biology of Folsomia candida Willem, 1902 (Collembola: Isotomidae. 512

Group effects on feeding in adult males of the desert locust Schistocerca gregaria (Forsk.), in relation to sexual maturation. 553

Biology of mountain pine beetle, Dendroctonus monticulae Hopkins, in the East Kootenay Region of British Columbia.I. Life cycle, brood development, and flight periods. 582

Prolonged larval development in Buprestis aurulenta L. (Coleoptera: Buprestidae). A review with new cases. 612

Development in Neodiprion excitans Rohwer as related to Oviposition and pine needle growth. 677

Effect of host age on rate of development of Nasonia vitripennis (Walk.) (hymenoptera: Pteromalidae). 692

INSECT MORTALITY
A sampling technique for population and mortality factors of the fruit-tree leaf roller, Archips argyrospilus (Wik.) (Lepidoptera: Tortricidae), on apples in Quebec. 170

Development, survival and fecundity of the potato aphid Macrosiphum euphorbiae (Thomas), at constant temperatures. 281

INSECT MUTATION
Mutants and linkage groups of the screw-worm fly. 703

INSECT NEUROPHYSIOLOGY
Effect of insecticides on neurophysiological activity in insects. 1698

INSECT NUTRITION
Studies on the feeding behavior of alfalfa weevil adults from the eastern and western united states. 119

B-vitamin requirements of the pink bollworm. 555

INSECT OLFACTORY SENSE
The olfactory guidance of flying insects. III. A technique for observing and recording flight paths. 465

INSECT OUTBREAKS
Note on the occurrence of Anacampsis populiella (Cierck) (Lepidoptera: Gelechiidae) in canada. 155

History of larch sawfly outbreaks and their effect on tamarack stands in Manitoba and Saskatchewan. 158

Outbreaks of the forest tent caterpillar, Malacosoma disstria Hbn., a periodic defollator of broad-leaved trees in Ontario. 214

INSECT PESTS
Introducing parasites and predators to control native pests. 177

The feasibility of using a neoaplectanid nematode for control of some forest insect pests. 205

Relationship of predatory and injurious insects in cotton fields in the Salt River Valley area of Arizona. 241

A quantitative method for assessing the nuisance caused by non-biting aquatic insects. 711

Control of several late-season cotton pests in field experiments in 1962. 1089

Insects destructive to bitterbrush flowers and seeds in southwestern Idaho. 1109

An evaluation of several insecticides against pests of broccoli. 1638

Toxicity of chemical and microbial insecticides to pest and beneficial insects on poled tomatoes. 1691

Mathematical models for use in insect pest control. 1981

INSECT PHYSIOLOGY
Changes in weight of abraded and unabraded larval pink bollworm under submersion and desiccation. 333

INSECT POPULATION
Effect of pre-emergence rainfall on population size in the tobacco hornworm. 93

An ecological study of arthropod populations on apple in northeastern Wisconsin: species affecting the fruit. 165

A sampling technique for population and mortality factors of the fruit-tree leaf roller, Archips argyrospilus (Wik.) (Lepidoptera: Tortricidae), on apples in Quebec. 170

Effects of different population levels of the European pine sawfly on young Scotch pine trees. 251

Ecological and nutritional studies on Coleomegilla maculata DeGeer (Coleoptera: Coccinellidae). II. The effects of different population densities and sex ratios on oviposition. 270

Field populations on three grain aphid species in Western Oregon. 409

Dispersion of insecticide-resistant populations of the house fly, Musca domestica L. 535

The relation of weather to two population declines of the black-headed budworm, Acleris variana (Fernald) (Lepidoptera:Tortricidae), in coastal Alaska. 595

The effect of repeated insecticidal applications on a natural tsetse population. 694

Density dependence in population fluctuations. 1980

INSECT POPULATION CONTROL
The reproduction-diapause approach to population control of the boll weevil. 497

INSECT POPULATION DENSITY
Further studies on techniques for sampling the density of African house fly populations. 1. A field comparison of th use of the Scudder grill and the sticky-flytrap method for sampling the indoor density of African house flies. 185

Density dependence in population fluctuations. 1980

INSECT POPULATION STATISTICS
Density dependence in population fluctuations. 1980

INSECT POPULATIONS
Effect of nitrogen levels on rice water weevil populations. 12

Population and mortality assessment during the egg and larval stages of the larch sawfly, Pristiphora erichsonii (Hgt.). 102

Methods for determining pink bollworm populations in blooms. 160

Fly populations in dairy barns.
hansens, e j. 225

The influence of spray programs on the fauna of apple orchards in Nova Scotia. XI. effects of low dosages of DDT on predator populations. 1168

INSECT REARING
Improved methods for mass rearing plum curculio, Conotrachelus nenuphar. 32

A method of rearing southern potato wireworm. 40

Local distribution of released laboratory-reared screw-worm flies in relation to water sources. 90

Continuous rearing of the carrot rust fly, Psila rosae (Fab.). 145

A method of rearing larvae of the wheat stem sawfly Cephus cinctus Nort. (Hymenoptera: Cephidae), under artificial conditions. 146

Life-history studies and rearing techniques for the

INSECT REARING EQUIPMENT

three-cornered alfalfa hopper. 150

Establishing and maintaining a culture of Hylemia brassicae (Bouche) Diptera:Anthomyiidae) in the greenhouse or laboratory. 187

Mass rearing of the western spotted cucumber beetle. 194

Mass-rearing of the larvae of nine noctuid species on a simple artificial medium. 213

A simplified technique for the laboratory rearing of Fannia canicularis. 267

Development of the beet armyworm and its parasite Chelonus texanus in relation to temperature. 321

Techniques for rearing the corn earworm, Heliothis zea. 322

Rearing of woolly pine needle aphid, Schizolachnus piniradiatae, viviparae. 355

The effects of position on hatching of honey bee eggs in the laboratory. 356

Bioassay of Bacillus thuringiensis-based microbial insecticides. III. Continuous propagation of the salt-marsh caterpillar, Estigmene acrea. 367

Rearing the horn fly, Haematobia irritans. 418

Pupal size and mortality, longevity, and reproduction of cabbage loopers reared at several densities. 434

Preliminary studies on mass rearing of the tobacco hornworm. 441

The use of agar media in transporting and rearing phytoseiid mites. 520

Studies on rearing honey bee larvae in the laboratory. I. The effect of royal jelly taken from different ages of queen cells on queen differentiation. 527

An inbreeding method of rearing the house fly. 543

Evaluation of five artificial diets for the laboratory rearing of alfalfa weevil larvae. 545

Artificial diets for the apple maggot, Rhagoletis pomonella. I. Mass rearing on certain diets. 548

Mass rearing of the onion maggot, hylemya antiqua, under laboratory conditions. 551

An improved medium for rearing red-banded leaf roller. 580

Laboratory methods for rearing rust mites (Phyllocoptruta oleivora and Aculus pelekassi) on citrus. 581

Mass rearing pink bollworms. 585

A simple artificial rearing medium for the cabbage looper. 606

Rearing of the bollworm on artificial diet. 660

Rearing Pseudotheraptus wayi Brown (Coreidae) a pest of coconuts in East Africa, evaluations of its susceptibility to various insecticides. 674

Improved technique for rearing the alfalfa weevil, Hypera postica (Gyllenhal), in the laboratory. 696

Larvicide tests with colony-reared Culicoides variipennis. 1609

Control of the nematode Leidynema appendiculata (Leidy) (Nemata: Rhabditida Thelastomatidae) in laboratory cultures of the American cockroach. 1668

Simplified methods for laboratory maintenance of saltatory Orthoptera. 1907

A metal cage for rearing grasshoppers. 1947

An economical method of maintaining adult diptera. 1957

INSECT REARING EQUIPMENT

Laboratory propagation of the horn fly. 531

Modifications of a lepidopterous larvae dispenser for a packaging machine. 1884

An improved method for storage of the alfalfa weevil in the laboratory. 1888

Plaster of paris as an aid in rearing insects pupating in the soil. 1893

A cylindrical cage for fly rearing. 1897

Simplified methods for laboratory maintenance of saltatory Orthoptera. 1907

New devices for rearing and handling house flies in the laboratory. 1924

Modification of a laboratory rearing method for the plum curculio, Conotrachelus nenuphar. 1925

Equipment for trapping and rearing the American cockroach, Periplaneta americana. 1985

INSECT REARING TECHNIQUES

Mass rearing of the cabbage maggot under controlled environmental conditions, with observations on the biology of Cyclodiene-susceptible and resisting strains. 424

A technique for rearing the gypsy moth, Porthetria dispar (L.), on an artificial diet. 554

Devices to facilitate rearing of Lepidopterous larvae. 1886

INSECT REMOVAL

A simple technique for recovering insects from sorghum heads in insecticide tests. 1160

Studies on the removal of embedded lone star ticks Amblyomma americanum. 1349

INSECT REPELLENTS

Influence of repellency on the efficacy of blatticides I. Learned modifications of behavior of the German cockroach. 370

Studies in mosquito repellency. III. flight posture. 386

N-alkyl toluamides in cloth as repellents for mosquitoes, ticks, and chiggers. 394

Evaluation of chemicals as honey bee attractants and repellents. 687

Carbamate-induced systemic repellency to the boll weevil on cotton. 1178

A boll weevil repellent from the volatile substance of cotton. 1182

Quantitative gas chromatography of isomers of insect repellent N,N-diethyltoluamide. 1805

INSECT REPRODUCTION

Pupal size and mortality, longevity, and reproduction of cabbage loopers reared at several densities. 434

INSECT RESISTANT PLANTS

Relation of gossypol content of cotton plants to insect resistance. 301

Resistance of small grains to the cereal leaf beetle. 1118

Varietal resistance to insect attack in various cruciferous crops. 1213

Plant resistance to insect attack in commercial cabbage varieties. 1214

Larval growth as a method of screening Triticum sp. for resistance to the cereal leaf beetle. 1228

INSECT RESPIRATION

Respiration measurement of Tribolium confusum by gas chromatography. 324

Influence of fumigation and age on carbon dioxide production of some stored-product insects. 662

INSECT SIZE
Seasonal variations in the fat content and size of Glossina swynnertoni Austen. 397

INSECT SURVEY
A critical appraisal of grasshopper forecast maps in Saskatcewan, 1936-1958. 51

INSECT TAXONOMY
International Commission on Zoological Nomenclature: Notice of proposed use of plenary powers in certain cases (A.(n.s.)50). 2

International Commission on Zoological Nomenclature: Notice of proposed use of plenary powers in certain cases (A.(n.s.)51). 3

Note on the movements of the mandibular and maxillary stylets of the aphid, Myzus persicae (Sulzer). 13

An annotated list of the Hippodamiini of Northern America with a key to the genera (Coleoptera: Coccinellidae). 15

Larval descriptions of Zeiraphera pacifica Freeman and Epinotia hopkinsana (Kearfott) (Lepidoptera: Olethreutidae). 35

A synopsis of the westermanni group of the genus Euxoa Hbn. (Lepidoptera: Noctuidae) with descriptions of two new species. 82

The North American species in Group II and III of Ips De Geer (Coleoptera: Scolytidae). 97

Notes on Canthonini of the Biologia Centrali-Americana and descriptions of new species (Coleoptera: Scarabaeidae). 99

Insects and other invertebrates from nests of the cardinal, Richmondena cardinalis (L.), at London, Ontario. 107

A taxonomic review of the genus Hoploselus Berlese (Acarina: Blattisocidae). 128

A revision of the genus Campichoeta Macquart (Diptera: Blastatidae). 144

Wing base structure in Lepidoptera. III. Taxomic characters. 209

A new Canadian species of Stenopterina Macq. with notes on the species allied to brevipes (Fab.) (Diptera:Otitidae). 212

New species and keys to the species of Ablautus Loew and Omniablautus Pritchard (Diptera: Asilidae). 245

A new species of Dysmicoccus Ferris (Pseudococcidae, Homoptera) on banana. 248

Five new species of the caddisfly Polycentropus from South America (Trichoptera: Polycentropodidae). 260

INSECT TEMPERATURE
Development, survival and fecundity of the potato aphid Macrosiphum euphorbiae (Thomas), at constant temperatures. 281

Low winter temperatures and the European pine shoot moth, Rhyacionia buoliana (Schiff.) in Ontario. 407

Preliminary observations on the biology of Folsomia candida Willem, 1902 (Collembola: Isotomidae. 512

Effect of heat on the fertility of the codling moth, Carpocapsa pomonella (L.) (Lepidoptera:Olethreutidae. 569

Biology of the mountain pine beetle, Dendroctonus monticolae Hopkins, in the East Kootenay region of British Columbia II. Behaviour in the host, fecundity, and internal changes in the female. 583

INSECT TRAPS
Seasonal and geographical distribution of Tabanidae (Diptera) in Manitoba, based on females captured in traps. 77

Reliability of trapping in determining the emergence period and sex ratio of the sugar-beet root maggot Tetanops myopaeformis (Roder) (Diptera:Otitidae). 83

Anthophora (Clisodon) terminalis Cresson in trap-nests in Wisconsin (Hymenoptera: Anthophoridae). 149

A note on colour preferences of some Homoptera and Thysanoptera in British Columbia. 246

A quick trap for area sampling of arthropods in grassland communities. 655

Occurence of eye gnats (Hippelates ssp.) in the central San Joaquin Valley, California. 685

Cereal aphid capture in yellow baffle trays. 1087

Methods for placing wasp trap nests in elevated locations. 1908

Use of cyanide in pink bollworm sex-lure traps. 1913

Trap for separating collections of insects by interval. 1929

Tests with attractants and a simple trap for the European earwig, Forficula auricularia. 1939

Baited traps for sampling Drosophila populations in tomato field plots. 1943

An effect of static electricity on captures in insect traps. 1946

Trapping as a means of studying the game tsetse, Glossina palpalis palpalis Rob.-Desv. 1952

A machine for changing the positions of a pair of directional light traps to eliminate positional effects. 1953

A carbon dioxide trap for Simuliidae (Diptera). 1971

INSECT VECTORS
Seasonal flights of insect vectors of several plant viruses in southern Arizona. 38

The painted leafhopper, Endria inimica (Say), a vector of wheat striate mosaic virus in Manitoba. 673

Aedes aegypti feeds on lizards in Puerto Rico. 712

Differential transmission of four strains of strawberry vein banding virus by four aphid vectors. 805

An improved method of selecting and breeding for active vectors of hoja blanca virus. 831

Experimental control of phony peach virus vectors with Disyston. 847

Further cytological and cytochemical studies on the insect vector of aster yellows virus. 866

Transmission of lettuce mosaic virus by a new vector, Pemphigus bursarius. 886

Curly top prevention by vector control on snap beans grown for seed. 934

Transmission of barley yellow-dwarf virus by four biotypes of the corn leaf aphid, Rhopalosiphum maidis. 959

Some effects of temperature on the transmission of cabbage mosaic virus by Myzus persicae. 1008

Some effects of temperature on the transmission of pea enation mosaic virus and on the biology of the pea aphid vector. 1009

Control of mink myiasis caused by the larvae of Wohlfahrtia vigil. 1322

A vehicle-mountable rotary-tube sprayer. 1875

INSECTICIDAL AEROSOLS
Pyrethrum reaction aerosol. 1557

INSECTICIDAL FILMS

INSECTICIDAL FILMS
A thermal preference method of biossay of the toxicity of insecticidal films to house flies. 1979

INSECTICIDAL PLANTS
Myristicin, an insecticide and synergist occurring naturally in the edible parts of parsnips. 1164

Toxicity of pine resin vapors to three species of Dendroctonus bark beetles. 1695

Naturally occurring insecticides in cruciferous crops. 1760

Nicandrenone, a new compound with insecticidal properties, isolated from Nicandra physaiodes. 1779

INSECTICIDE APPLICATION
Topical application and insecticide resistance studies on the honey bee. 406

The effect of repeated insecticidal applications on a natural tsetse population. 694

Spring applications of insecticides for control of alfalfa weevil in Alabama. 1068

Early-season application of DDT for pink bollworm control. 1082

Application of systemic insecticides as seed treatment to protect wheat plants against grasshoppers and wheat stem sawfly. 1238

Comparison of insecticide application schedules for control of cotton insects. 1261

Further tests with power dusting to control the sheep ked. 1353

Residues in cattle tissues following back-line and spray applications of trichlorfon. 1422

Residue deposition of co-ral in the tissues of back-line-treated cattle. 1423

Insecticide residue studies: The fate of heptachlor in the soil following granular application to the surface. 1428

Insecticide residues in milk: Determination of methoxychlor and or metabolites in milk following topical application to dairy cows. 1448

DDT residues on sweet corn ear tips and silks after treatment with dust, spray, or granular formulations. 1475

Vertical distribution and persistence of insecticidal residues in soils as influenced by mode of application and a cover crop. 1492

A study of the dermal treatment of a steer with C14-labeled Imidan. 1567

Effectiveness of seven organophosphorus compounds as space applications against Musca domestica. 1633

Spray deposit on oil-sensitive cards and spruce budworm mortality. 1641

Micronized insecticidal dusts for aircraft disinsectization. 1699

Herbicide uptake and distribution: Synthesis of carbon -14-labeled dalapon and trial applications to soybean and corn plants. 1816

Killing house-flies, Musca domestica L., by means of hanging drops of insecticide. 1911

Precision equipment for applying granular formulations in insecticide tests. 1926

A plot seeder modified to apply seed and granular insecticides simultaneously. 1955

Hand seeder adapted for precision planting or for application of granulated insecticides or fertilizers. 1956

A blower-augur metering granular applicator. 1962

Ground-applied insecticides against the cereal leaf beetle. 1964

INSECTICIDE BAITS
Attractiveness of insecticide baits to adults of Drosophila melanogaster. 514

INSECTICIDE DEPOSITS
Factors contributing to the loss of insecticide deposits on cattle. 1516

INSECTICIDE DISTRIBUTION
A photographic technique for recording distribution and loss of insecticides on cattle. 1876

INSECTICIDE LOSS
A photographic technique for recording distribution and loss of insecticides on cattle. 1876

INSECTICIDE RESIDUES
Metabolism of and residues associated with dermal and intramuscular application of radiolabeled Fenthion to dairy cows. 1350

Lindane and BHC in egg yolks following recommended uses for house and mite control. 1364

Persistence of insecticides in soil and their effects on cotton in Georgia. 1417

Gas chromatographic and colorimetric measurement of dimethoate residues. 1421

Residues in cattle tissues following back-line and spray applications of trichlorfon. 1422

Residue deposition of co-ral in the tissues of back-line-treated cattle. 1423

Method for phosphamidon residue analysis. 1426

Insecticide residue studies: The fate of heptachlor in the soil following granular application to the surface. 1428

Dimethoate residues on soybean, corn, and grass forage. 1431

Residues of endosulfan in meat and milk of cattle fed treated forages. 1432

Determination of insecticide residues on green and flue-cured tobacco and in main-stream cigarette smoke. 1437

The colorimetric determination of o-isopropoxyphenyl-N-methylcarbamate. 1438

Residual sprays for the control of house flies in field tests. 1439

Determination of tepa residues on chemosterilized Mexican fruit flies. 1444

Residues of OO-dimethyl S-(N-methylcarbamoylmethyl) phosphorothiolothionate (Dimethoate) in sprayed crops. 1445

Residues in body tissues of livestock sprayed with Sevin or given Sevin in the diet. 1446

Insecticide residues: Meat and milk residues from livestock sprays. 1447

Insecticide residues in milk: Determination of methoxychlor and or metabolites in milk following topical application to dairy cows. 1448

Insecticide residues:Determination of residues of phorate and its insecticidally active metabolities by cholinesterase inhibition Part I. Basic method Part II. Alternative sample preparation and recovery data. 1450

Determination of organic fluorine residues in blackcurrants. 1454

Chlorinated hydrocarbon insecticide residues in soils of urban areas,Battle Creek, Michigan. 1459

A simulated-field method of testing residual insecticide deposits against cockroaches. 1460

Acaricide residues:A modification of the Rosenthal method for rapid determination of Kelthane residues. 1462

Colorimetric method for the estimation of dimethoate residues. 1463

Insecticide residues: Colorimetric determination of residues of phorate and its insecticidally active metabolites. 1464

Insecticide residues:A procedure for the microdetermination of 1-butoxy-2-(2-thiocyanoethoxy)-ethane (Lethane 384) with applications for determination of residues in milk and animal tissues. 1465

Colorimetric method for the determination of ethion of residues. 1466

Thiodan and Telodrin residues on tobacco. 1470

Insecticide residues in milk: The effects of feeding high levels of Sevin on residue, flavor, and odor of the milk of dairy cattle. 1471

Residues of heptachlor epoxide and telodrin in milk from cows fed at part per billion insecticide levels. 1473

DDT residues on sweet corn ear tips and silks after treatment with dust, spray, or granular formulations. 1475

Herbicide residues:The determination of ethyl N,N-di-n-propylthiolcarbamate (EPTC) in soil by gas chromatography. 1478

A technique for testing acaricide residues against two-spotted spider mites on field-grown roses. 1480

Acute toxicity of Delnav and its residues in tissues of livestock. 1481

Determination of Sevin insecticide and its metabolites in poultry tissues and eggs. 1482

Herbicide residues in milk:Form and magnitude of 2,2-dichloropropionic acid (dalapon) residues in milk. 1489

Rapid cleanup of dairy products for analysis of chlorinated insecticide residue by electron capture gas chromatography. 1490

Fungicide residues:A modified Gibbs method for the determination of 1 p.p.m. or less of o-phenylphenol in fruits. 1491

Vertical distribution and persistence of insecticidal residues in soils as influenced by mode of application and a cover crop. 1492

An improved colorimetric method for determining endosulfan (Thiodan) residues in vegetables and beef fat. 1495

Determination of residual 4-dimethylamino-3,5-xylyl methylcarbamate and 4-dimethylamino-3,5-xylenol by use of luteoarsenotungstic acid. 1497

Effect of environmental factors on phosphamidon degradation. 1500

Insecticide residues in meat and milk: determination of heptachlor epoxide in fat and milk. 1501

Insecticide residue studies: Determination of heptachlor and heptachlor epoxide in soils. 1506

Dimethoate residues in leafy crops. 1507

Methoxychlor in eggs and chicken tissues. 1508

Forced volatilization cleanup of butterfat for gas chromatographic evaluation of organochlorine insecticide residues. 1509

Insecticide residues in milk: Excretion of Co-Ral in the milk of dairy cattle. 1513

Rates of disappearance of zolone and imidan from alfalfa. 1518

Disappearance of guthion from forage crops in Massachusetts. 1519

The disappearance of residues of bidrin from alfalfa. 1520

Dylox residues on vegetable crops. 1521

Recovery of ethylene dibromide residues from fumigated whole kernel and milled wheat fractions. 1522

Pesticide residues:Modified and improved procedure for Schoniger total chlorine residue analysis. 1524

Persistance of dimethoate residues in hemlock treated for hemlock florinia scale as determined by oxygen flask combustion. 1525

Insecticide residues in peppermint and their distillation with peppermint oil. 1526

Phorate residues in tomato fruit and foliage. 1532

Insecticide residues: Toxaphene residues on pangolagrass. 1533

Improved colorimetric determination of phorate residues in plant tissues. 1534

Insectide residues: Residue analysis of a chlorinated insecticide (Thiodan) by combination of gas chromatography and infrared spectrophotometry. 1538

The effects of coumaphos on poultry and its residues in tissue and eggs. 1687

Recovery of ethylene chlorobromide from agricultural products. 1859

The metabolism of Sevin in dairy cows. 1870

Killing house-flies, Musca domestica L., by means of hanging drops of insecticide. 1911

INSECTICIDE RESISTANT INSECTS

Distribution of cyclodiene-insecticide resistance in the seed maggot complex in relation to cropping practices in southwestern Ontario. 84

Dehydrochlorination and DDT-RESISTANCE in Aedes aegypti. 261

Resistance of the alfalfa weevil to heptachlor. 262

Resistance induction in Tetranychus telarius with binapacryl. 265

DDT resistance in honey bees. 271

The influence of certain biological and environmental factors on insecticide tolerance of the lygus bug, Lygus hesperus. 274

Insecticide resistance in the adult western corn rootworm in Nebraska. 276

Resistance to DDT in the adult codling moth and reference curves for guthion and carbaryl. 282

Mechanisms of insect resistance to the chlorohydrocarbon insecticides. 304

Resistance to DDT in Heliothis virescens. 307

DDT resistance in Heliothis zea. 309

Absorption and metabolism of C14-labeled DDT by DDT-susceptible and DDT-RESISTANT pink bollworm adults. 314

Field resistance of horn flies to the organic phosphate insecticide ronnel. 317

Pink bollworm resistance to DDT in the Laguna area of Mexico. 330

Laboratory studies on resistance of the body louse to insecticides. 334

Determination of resistance by dipping lice in acetone solutions. 335

Inheritance of resistance to DDT in Blattella germanica.

INSECTICIDE SORPTION (SOILS)

336

Resistance to Teiodrin in the German cockroach, BlattelIa germanica. 337

Effect of repeated sprays on susceptibiiity of California red scale to parathion. 342

A comparison of the sterols in resistant and susceptible house flies, Musca domestica. 374

Status of boll weevil resistance to insecticides in Louisiana during 1961. 405

Insecticide resistance in the pear psylla. 422

A comparative study of certain biological phenomena detected in a parathion-treated strain and a susceptible strain of the plum curcuiio, Conotrachelus nenuphar. 431

The mechanism of DDT resistance in the spotted root maggot Euxesta notata. 443

Non-preference as a mechanism of sweetclover and alfalfa resistance to the sweetclover aphid and the spotted alfalfa aphid. 476

Rate of increase in resistance to DDT in pink bollworm aduits. 500

Investigations of pink boliworm resistance to DDT in Mexico and the United States. 501

8oliworm and tobacco budworm resistance to some insecticides in lower rio grande valley in 1964. 502

Laboratory technique for evaluating and detecting horn fly populations that are susceptibie or toierant to four insecticides by using a modified WHO test kit. 532

Resistance in the eye gnat Hippelates collusor to soil insecticides. 537

The enzymatic in vitro degradation of DDT by susceptible and DDT - resistant body lice. 560

Development of resistance to insecticides by the onion maggot, Hylemya antiqua, in Minnesota. 561

Methods of testing Hylemya root maggots for insecticide resistance. 579

Comparative insecticidal susceptibility of fieId-coiiected and iaboratory-reared face flies, Musca autumnalis. 591

Hydroxylation as a factor in resistance in house flies and blow flies. 597

Insecticide resistance tests for the southern potato wireworm. 688

Sugarcane borer resistance to insecticides. 693

Susceptibiiity of mature and newly emerged face flies to chcmosterlilization with apholate. 700

Evaluation of soii insecticide treatments for control of cyclodiene-resistant southern corn rootworms. 1555

Chemical structure and toxicity of some carbamoyloxy phosphorodithioates to susceptible and organophosphorus-resistant strains of mites. 1628

Penetration and metabolism of DDT in resistant and susceptible house flies and the effect on latent toxicity. 1684

INSECTICIDE SORPTION (SOILS)
Availabiiity of dieldrin to adult Blissus levcopterus and larval Cyclocephala immaculata in treated sand, ioam, and muck soils. 1418

INSECTICIDE SYNERGISTS
Myristicin, an insecticide and synergist occurring naturally in the edible parts of parsnips. 1164

Synergism of organophosphorus systemic insecticides. 1561

Synergism among oral carcinogens II. Results of the simultaneous feeding of bladder carcinogens to dogs. 1587

Temperature effects on toxicity of synergized carbamate insecticides on house flies. 1593

Synergistic and antagonistic actions of insecticide-synergist combinations and their mode of action. 1700

Carbamate insecticides: Synergism by organothiocyanates. 1825

Identification of 3, 4-methylenedioxyphenyl synergists by thin-layer chromatography. 1878

INSECTICIDE SYNTHESIS
Synthesis and insecticidai activity of O-methyl O-(2,4,5-trichlorophenyl) phosphoramidothioates and related compounds. 1815

INSECTICIDE TRANSLOCATION
Translocation of DDT and heptachlor in soybeans. 1453

INSECTICIDES
A method of rearing southern potato wireworm. 40

Insecticide resistance in the adult western corn rootworm in Nebraska. 276

Laboratory evaluation of certain chlorinated hydrocarbon insecticides against the imported fire ant. 280

Laboratory insectIcide tests against the bollworm. 300

Laboratory tests of insecticides against Lygus hesperus on cotton. 302

A technique of continuous exposure for determining resistance of house flies to insecticides. 306

The status of boll weevil resistance to chlorinated hydrocarbon insecticides in Texas. 308

Field resistance of horn flies to the organic phosphate insecticide ronnel. 317

Zimmerman pine moth biology and control. 320

Face fly control studies in West Virginia in 1960-1961. 364

Insecticide experiments to control green peach aphid and pepper weevil on peppers. 373

Laboratory screening of insecticides for the prevention of reproduction of Boophilus ticks. 404

Status of boll weevil resistance to insecticides in Louisiana during 1961. 405

Insecticide tests on the corn earworm as a pest of lettuce in Arizona. 420

Laboratory tests to determine susceptibiiity of adult horn fly and stable fly to insecticides. 427

Resistance to ronnel in a strain of horn flies. 428

Effectiveness of insecticides in soil against termites after 15 years. 438

The acute oral toxicities of some insecticides to American cockroaches. 461

Insecticide tests against gypsy moth larvae. 463

Substances inhibitory to insect feeding with insecticidal properties from fungi. 474

The influence of parathion and para-oxon on sensory hairs of flies. 490

Recent laboratory tests of insecticides against locusts. 505

Dispersion of insecticide-resistant populations of the house fly, Musca domestica L. 535

Resistance in the eye gnat Hippelates collusor to soil insecticides. 537

New insecticides against adults of two species of Hippe-

iates eye gnats. 540

Development of resistance to insecticides by the onion maggot, Hylemya antiqua, in Minnesota. 561

Field insecticide tests against several cotton pests. 563

Effect of chemical and microbial insecticides on several insect pests of lettuce in southern California. 604

Comparison of aerial spray and dust insecticide applications for the control of cotton insects in Arizona. 671

Rearing Pseudotheraptus wayi Brown (Coreidae) a pest of coconuts in East Africa, evaluations of its susceptibility to various insecticides. 674

Insecticide treatments for aphid control in relation to spread of barley yellow dwarf virus. 786

The cribrate weevil, a new pest of the globe artichoke in California. 863

European elm scale control investigations. 1015

Seed treatment with phorate, disulfoton, and other insecticides to control pea insects in Iraq. 1060

Control of several late-season cotton pests in field experiments in 1962. 1089

Evaluation of insecticides for control of the smaller European elm bark beetle. 1098

Experiments for the control of a juniper tip midge. 1107

Evaluating the control of the clover root curculio larva on alfalfa. 1114

Field tests for the control of certain alfalfa insect pests in New York. 1115

Systemic insecticides for the control of western flower thrips on bulb onions. 1123

Tests with systemic insecticides for control of insects and certain diseases on potatoes. 1125

Granulated insecticides for control of some corn pests. 1129

Insecticidal field screening tests against the fall armyworm in sorghum and corn. 1130

Field insecticide screening tests against the corn flea beetle. 1131

Further field experiments on the use of Bacillus thuringiensis and chemical insecticides for the control of the european corn borer, Ostrinia nubilalis, on sweet corn in southwestern quebec. 1139

Granular application of systemics for control of european pine shoot moth. 1154

A simple technique for recovering insects from sorghum heads in insecticide tests. 1160

Resistance of experimental cotton strain 1514 to the bollworm and cotton fleahopper. 1170

Insecticide deposits from dusts or sprays applied by aircraft to flue-cured tobacco. 1177

Comparison of soil surface treatments of some fumigants and soil insecticides for apple maggot control. 1179

Progress on insecticidal control of apple insects. 1199

Relationship of Lepidoptera light-trap collections to cotton field infestations. 1200

Insecticide tests against thrips on cotton. 1201

Insecticidal field trials for the control of potato aphids in New Brunswick, 1948-60. 1206

Evaluation of the effectiveness of certain insecticides for control of the vetch bruchid. 1216

Effect of water solubility and soil moisture upon plant uptake of granulated systemic insecticides. 1218

Evaluation of systemic insecticides for cotton insect control. 1219

The influence of fertilizers on sugar beets which received insecticide-fungicide seed treatments. 1230

Insecticide and microbial dusts and application intervals for control of lettuce insects. 1231

The role of new insecticides for control of rice stem borer in Orissa. 1232

Duration of control of the strawberry aphid by several chemicals. 1234

Control of the peach tree borer on young peach trees by a treatment before planting. 1239

Experiment on alfalfa insect control in Maryland. 1245

Insecticides for tobacco flea beetle control on cigar-wrapper tobacco. 1247

Effect of insecticides on the green peach aphid, Myzus persicae (Sulzer), infesting burley tobacco. 1249

A field test with insecticides to control the scale Fiorinia externa on Canadian hemlock. 1258

Comparison of Bacillus thuringiensis Berliner var. thuringiensis and chemical insecticides for control of the alfalfa caterpillar. 1293

Control of the hackberry-nipple gall maker with new organic insecticides. 1326

Effects of certain systemic insecticides in backrubbers for cattle grub control. 1328

Face fly and horn fly control on cattle - 1962-1964. 1337

Insecticide tests against the tropical horse tick, Dermacentor nitens, on horses. 1340

Field tests with insecticides for the control of ticks on livestock. 1341

Further tests with power dusting to control the sheep ked. 1353

An investigation of the cattle louse problem. 1358

Differential susceptibility of maggots of several species to droppings from chickens fed insecticide-treated rations. 1359

Susceptibility and resistance of mosquito fish to several insecticides. 1405

The effect of humidity on the volatization of certain insecticides. 1494

Sevin residues in poultry products. 1499

Pesticides and food flavor:Effect of insecticides and fungicides on the flavor quality of fruits and vegetables. 1505

Biological assay of insecticides using the brine shrimp, Artemia salina (L). 1528

Toxicity of several insecticides to the adult alfalfa seed chalcid in laboratory tests. 1545

Effectiveness of insecticides for control of the lesser peach tree borer. 1554

Approaches to mechanisms of insecticidal action. 1575

Laboratory and field evaluation of SD 9129 as an insecticide. 1579

Field experiments with insecticides on cotton for control of the boll weevil, bollworm, and cotton leafworm in 1961. 1585

INSECTS

Effects of certain insecticides on earthworms. 1589

Screening insecticides for control of the adult periodical cicada. 1597

Field tests with new insecticides for control of alfafa weevil larvae in western Neraska. 1604

The Youden Square as an experimental design for the field evaluation of boll weevil insecticides. 1607

Observations on the biology of the southern corn rootworm and insecticidal tests for its control on peanuts in Georgia. 1612

Effectiveness of insecticides against the corn leaf aphid in sorghum whorls. 1614

Evaluation of three alternative insecticides for control of grasshoppers in Alberta. 1619

Evaluation of new insecticides for control of onion thrips. 1622

A test of systemic insecticides to control Douglas-fir cone and seed insects. 1630

Laboratory tests of insecticides on mosquito larvae in polluted and tap water. 1637

An evaluation of several insecticides against pests of broccoli. 1638

Effects of insecticides on the scorpion Centruroides vittatus. 1646

Selective insecticidal action of isopropyl parathion and analogues. 1648

Insecticidal carbamates:comparison of the activities of N--methyl and N,N-dimethylcarbamates of various phenols. 1649

Effects of low dosages of insecticidal seed-treatments on cotton and cotton insects. 1651

Evaluation of insecticides in the laboratory against adult and larval stable flies. 1655

Field evaluation of organophosphate insecticides as soil treatments for the control of Hippelates gnats. 1656

Contact toxicity of ten insecticides to adults of the carrot rust fly. 1658

Metabolism of insecticides by various insect species. 1671

Evaluation of several insecticides to control the onion maggot. 1677

Tests for boll weevil control with a systemic insecticide and a boll weevil feeding stimulant. 1680

Preliminary tests with insecticides for the control of the little blue cattle louse. 1682

Acute and subacute toxicity of several insecticides to chicks. 1688

Acute and subacute toxicity of several organophosphorus insecticides to chicks. 1689

Field experiments on insecticidal control of lepidopterous larvae on cabbage and cauliflower. 1690

Toxicity of chemical and microbial insecticides to pest and beneficial insects on poled tomatoes. 1691

Differential toxicity of insecticides to the cabbage aphid and two associated entomophagous insect species. 1692

Persistent psychiatric symptoms from exposure to organophosphate insecticides. 1694

Effect of insecticides on neurophysiological activity in insects. 1698

Micronized insecticidal dusts for aircraft disinsectization. 1699

Field and laboratory studies on control of currant borer. 1702

Oils and surfactants alone, and insecticide-oil combinations for aphid control on turnips and cabbage. 1714

Translocation of some chlorinated hydrocarbon insecticides into the aerial parts of pea plants. 1761

New approved common names of insecticides. Ill. . 1814

Carbamate insecticides: insecticidal properties of some optically active substituted phenyl-in-methylcarbamates. 1829

Structure and insecticidal activity of alkyl 2,4,5-trichloro -phenyl n-alkyiphosphoramidates. 1830

Isotope-labeled insecticides:Preparation of labeled 2-ethylthioethanol, a demeton intermediate. 1834

Simultaneous quantitative determination of lindane and DDT gas chromatography. 1841

Spread factor variation for oil-base, aerial sprays. 1845

Bioassay of a microbial insecticide containing spores of Bacillus thuringiensis Berliner. 1849

Integration of physico-chemical and biological techniques in specific bioassay, with specific reference to bidrin insecticide. 1864

Gas chromatography retention times and sensitivity data for insecticides and herbicides. 1880

Killing house-flies, Musca domestica L., by means of hanging drops of insecticide. 1911

Dusting stations and cable backrubbers as self-applicatory devices for control of the face fly. 1915

Ground equipment for applying low-volume insecticides to sweet corn. 1920

A simple technique for tritiation of aromatic insecticides. 1927

A laboratory insecticide sprayer designed to simulate field spraying equipment. 1948

Tests with trap design and killing agents in black-light survey traps. 1963

Ground-applied insecticides against the cereal leaf beetle. 1964

INSECTS

Insects and spiders from goldenrod gails of Gnorimoschema gallaesolidaginis Riley (Gelechiidae). 106

Insects and other invertebrates from nests of the cardinal, Richmondena cardinalis (L.), at London, Ontario. 107

Insects associated with flowering Marsh Marigold, Caltha palustris L., at London, Ontario. 108

A note on colour preferences of some Homoptera and Thysanoptera in British Columbia. 246

The stabilization of relative humidity with honey in closed systems. 287

Insect chemosterilants: incorporation of 5-fluorouracil into house fly eggs. 469

Substances inhibitory to insect feeding with insecticidal properties from fungi. 474

Native insects as pollinators of caged alfalfa clones and seedling performance of the progeny. 487

Delayed inoculative freezing of insects. 592

The penetration and metabolism of H-Dimethoate in insects. 658

Primary odors and insect attraction. 690

Some quantitative aspects of insect attraction. 691

The effects of percussion on insect pests of grain. 1066

Field tests for the control of certain alfalfa insect pests in New York. 1115

Granulated systemic insecticides for vegetable insect control in south texas. 1126

A simple technique for recovering insects from sorghum heads in insecticide tests. 1160

Control of plant bugs and other insects on Kentucky bluegrass grown for seed. 1244

Vaporized Dibrom for control of Drosophila in lemon storage houses. 1387

Toxicity of Dibrom vapors to greenhouse insects. 1406

A test of systemic insecticides to control Douglas-fir cone and seed insects. 1630

Effects of low dosages of insecticidal seed-treatments on cotton and cotton insects. 1651

Toxicity of chemical and microbial insecticides to pest and beneficial insects on poled tomatoes. 1691

Evaluation of Shell SD-8447 for control of two sweet corn insects. 1716

A method of repointing insect dissecting forceps. 1889

A power tool for sampling soil for insects. 1909

An inexpensive portable suction insect sampler. 1919

Rubber-bulb aspirators to handle minute insects. 1934

INTERNAL BROWNING (TOMATOES)
Diagnostic aids in distinguishing internal browning and graywall of tomato. 908

INTERNAL CORK (SWEETPOTATOES)
Control of internal cork of sweet potato by isolation. 880

Analysis for internal cork virus (ICV) in serial nodes of sweet potato stems. 881

INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE
International Commission on Zoological Nomenclature: Notice of proposed use of plenary powers in certain cases (A.(n.s.)50). 2

International Commission on Zoological Nomenclature: Notice of proposed use of plenary powers in certain cases (A.(n.s.)51). 3

ION EXCHANGE
Determination of strontium-90 in milk by an ion exchange method. 1512

IONIZATION
The relation between basicity and selectivity in organophosphates. 1854

IONIZING RADIATION
Reproductive potential of the sweetpotato weevil after exposure to ionizing radiations. 666

IONS
Effects of nitrogen and potassium fertilisers on the mineral status of perennial ryegrass (Lolium perenne). II. Anion -cation relationship. 1786

IPOMOEA TRICOLOR
Analysis for internal cork virus (ICV) in serial nodes of sweet potato stems. 881

IPS CONFUSUS
Experiments on the interrelationship between oleoresin exudation pressure in Pinus ponderosa and attack by Ips confusus (Lec.) (Coleoptera: Scolytidae). 1276

IRAQ
Seed treatment with phorate, disulfoton, and other insecticides to control pea insects in Iraq. 1060

IRIDOMYRMEX HUMILIS
Argentine ant control on citrus in California with granular formulations of certain chlorinated hydrocarbons. 1192

IRRADIATED FOOD
A study of the possible carcinogenicity of irradiated foods. 1370

Growth, reproduction, mortality, and pathologic changes in rats fed gamma irradiated potatoes. 1562

Dietary considerations of the radionuclide contamination of nonmilk foods. 1706

IRRADIATION
Influence of aeration during gamma irradiation of screw-worm pupae. 289

Some effects of irradiation on Cochliomyia hominivorax. 358

Some effects of gamma radiation on fertility of Drosophila melanogaster and viability of sperm after multiple matings of males. 436

Effects of gamma radiation on mating competitiveness and behavior of Drosophila melanogaster males. 437

Effects of 300 KV X-ray radiation on Sitophilus oryzae. 444

Effects of gamma radiation on codling moth eggs. 447

Egg mortality after gamma irradiation of adults of the omnivorous leaf roller. 448

Sterilization of onion maggots by irradiation with cesium-137. 517

The effects of confining confused flour beetles in gelatin capsules before, during, and after gamma irradiation. 651

Suppression of the reproductive potential of the codling moth by gamma irradiated males in caged orchard trees. 709

IRREGULAR PINE SCALE
Studies on the biology of the irregular pine scale. 109

ISARIOPSIS
An angular leaf spot of Magnolia grandiflora caused by Isariopsis sp. 825

ISOLATES
Variation in maize seedling blight symptoms with changes in pathogen species, isolate and host genotype. 857

Effect of culture substrate on the virulence of single-Basidiospore isolates of Peliicularia filamentosa. 993

ISOMERISM
The estimation of mixtures of DDT and BHC isomers using infrared differential null-analysis. 1821

ISOMERS
Quantitative gas chromatography of isomers of insect repellent N,N-diethyltoluamide. 1805

ISOPROPYL N-(3-CHLOROPHENYL)CARBAMATE
Determination of micro amounts of isopropyl N-(3-chlorophenyl)carbamate.(CIPC) in milk and urine excreted from dairy cows. 1461

Chronic toxicologic studies on isopropyl N-(3-chlorophenyl) carbamate (CIPC) . 1635

ISOPROPYL PARATHION
Selective insecticidal action of isopropyl parathion and analogues. 1648

ISOTOPES
Movement of radioisotopes in Rhizoctonia solani. 1775

Isotope-labeled insecticides:Ethion-P32-2. 1827

ISRAEL

Isotope-labeled insecticides:Preparation of labeled 2-ethylthioethanol, a demeton intermediate. 1834

Determination of endogenous gibberellins in green malt by isotopic, derivative dilution procedures. 1843

ISRAEL
Pseudomonas solanacearum in Israel. 1029

ISREAL
The life-history of the melon weevil, Baris granulipennis (Tourn.) in israel. 195

IXODIDES
N-alkyl toluamides in cloth as repellents for mosquitoes, ticks, and chiggers. 394

Field tests with insecticides for the control of ticks on livestock. 1341

Control of ticks on cattle with toxaphene applied by power sprayer and spray race. 1369

IXORA
Control of the scale Pulvinaria psidii on Ixora. 1384

JAPANESE MAMUSHI
The relationship between the hemorrhagic and lethal activities of japanese mamushi (Agkistrodon halys blomhoffii) venom. 1660

JUNE YELLOWS (LETTUCE)
Two viruses that induce symptoms typical of June yellows in lettuce. 792

JUNIPER TIP MIDGE
Experiments for the control of a juniper tip midge. 1107

JUNIPERUS
Regularities in the size and orientation of juniper fragments attached to the cases of the bagworm, Thyridopteryx ephemeraeformis (Haw.). 67

Peripioca nigra, a major cause of dieback of ornamental juniper in California. 120

Needle blight of redcedar, Juniperus virginiana l. 850

JUNIPERUS VIRGINIANA
Needle blight of redcedar, Juniperus virginiana l. 850

JUNIPERUS VIRGINIANA CANAERTI SENECL
Experiments for the control of a juniper tip midge. 1107

JUTE
Studies on the bionomics of the jute stem girdler, Nupserha bicolor postbrunnea Dutt (Col., Camiidae). 48

KANSAS
Kansas aeromycology, VII. Smuts. 927

KENTUCKY
Seasonal distribution of Heliothis virescens and H. zea on tobacco in Kentucky. 1122

KIDNEY BEANS
A virus of wide host range seed-borne in Phaseolus vulgaris. 995

KIDNEYS
Toxicity of intravenously injected uranium in guinea pigs. 1594

KOREA
The green rice leafhopper, Nephotettix bipunctatus cincticeps, and its control in Korea. 1067

Laboratory evaluation of several chemical protectants against the southern cowpea weevil, Callosobruchus chinensis, on stored dried beans in Korea. 1379

KUBANKA WHEAT
Variability in stem rust reactions of Kubanka wheat with light intensity and temperature. 892
The pH tolerance of horse fly larvae. 529

LABELING
Mass marking boll weevil field populations. 42

Fluorescent biological stains as markers for Drosophila. 239

A study of the dermal treatment of a steer with C14-labeled Imidan. 1567

Drywood termite metabolism of Vikane fumigant as shown by labeled pool technique. 1848

A simple technique for tritiation of aromatic insecticides. 1927

LABORATORIES
Improved laboratory techniques for rearing California red scale on lemons. 645

Influence of the glandless genes on feeding, oviposition, and development of the boll weevil in the laboratory. 1183

LABORATORY
Evaluation of five artificial diets for the laboratory rearing of alfalfa weevil larvae. 545

LABORATORY EQUIPMENT
Adhesives for holding mites to glass plates. 1892

Teflon as a barrier to insects. 1903

LABORATORY INSECTS
Sexual acceptability of laboratory strains of male house flies in competition with wild strains. 388

LABORATORY REARING
Laboratory rearing of Anastrepha serpentina. 623

Laboratory rearing of the tobacco hornworm, Protoparce sexta (Lepidoptera: Sphingidae). 664

LABORATORY-REARED INSECTS
Control of four diseases of laboratory-reared boll weevils. 65

LADINO CLOVER
Relationship between injury by the clover root curculio and incidence of Fusarium root rot in Ladino white clover. 820

Heat-induced stolon rot of ladino white clover in the greenhouse. 855

LAKE STATES
Site of spruce budworm egg masses on their preferred hosts in the Lake States. 252

LAND
Growth and sporulation of Guignardia bidwellii in pure culture and in the field. 761

LARGE ASPEN TORTRIX
The large aspen tortrix, Choristoneura conflictana, in California (Lepidoptera: Tortricidae). 244

LARIX LARICINA
History of larch sawfly outbreaks and their effect on tamarack stands in Manitoba and Saskatchewan. 158

LARVAE
A new species of Paraprosalpia villeneuve (Diptera: Anthomyiidae) reared from a beetle larva. 27

Larval descriptions of Zelraphera pacifica Freeman and Epinotia hopkinsana (Kearfott) (Lepidoptera: Olethreutidae). 35

Immature stages of four Neartic Notodontidae (Lepidoptera). 55

The caudal appendage of final-instar larvae of some Porizontinae (Hymenoptera: Ichneumonidae). 57

Adult boll weevils and eggs marked with dye fed in larval diet. 66

Population and mortality assessment during the egg and larval stages of the larch sawfly, Pristiphora erichsonii (Hgt.). 102

Effects of defoliation on survival of larvae of the larch sawfly Prisitiphora erichsonii (Htg.). 103

Larval habitats, development, and parasites of some Tabanidae (Diptera) in southern Ontario. 105

The effect of aggregation on egg and larval survival in Neodiprion swainei Midd. (Hymenoptera: Diprionidae). 132

Evolution and adaptation of larval characters in the Tortricidae. 138

Problems in naming the setae of Lepidopterous larvae. 139

A method of rearing larvae of the wheat stem sawfly Cephus cinctus Nort. (Hymenoptera: Cephidae), under artificial conditions. 146

First findings of cotton leafworm larvae in the United States, 1922 to 1963. 171

A technique for the statistical sampling of Fannia larval densities on poultry ranches. 206

The external morphology of the adults and ultimate larval instar of the larch sawfly, Pristiphora erichsonii (Htg.) (Hymenoptera: Tenthredinidae). 254

In vitro establishment and development of Eucosma sp. larvae from cones of Pinus resinosa on an artificial nutrient medium. 286

Comparative morphology of some Chrysobothris larvae (Coleoptera: Buprestidae) of eastern Canada. 292

Zimmerman pine moth biology and control. 320

Techniques for rearing the corn earworm, Heliothis zea. 322

Changes in weight of abraded and unabraded larval pink bollworm under submersion and desiccation. 333

Experimental field techniques used to evaluate gypsy moth, porthetria dispar, control in new york. 339

Influence of cold storage on the viability of alfalfa weevil eggs and feeding ability of hatching larvae. 341

Studies on mosquito larvae. I. Later instars of eastern North American species. 362

Pine sawfly larvae, Neodiprion excitans, survive subfreezing temperatures in Florida. 378

The final-instar larva of Bracon nuperus Cress. (hymenoptera : Braconidae). 380

Immature stages of western corn rootworm. 391

Hessian fly larval strain responses to simulated weather conditions in the greenhouse and laboratory. 414

Transmission of sacbrood disease to individual honey bee larvae. 439

Quantitive relationship between consumption and excretion of dry matter by larvae of the pale western cutworm, Agrotis orthogonia Morr. (Lepidoptera: Noctuidae). 458

Insecticide tests against gypsy moth larvae. 463

The status of Tiphia vernalis Rohwer, a parasite of the Japanese Beetle, in Southern New Jersey and Southeastern Pennsylvania in 1963. 484

Bollworm and tobacco budworm resistance to some insecticides in lower rio grande valley in 1964. 502

The effects of various larval and adult diets on the fecundity and longevity of the bollworm, tobacco budworm, and cotton leafworm. 503

Additional larvae of the North American Olethreutinae (1) (Lepidoptera: Tortricidae). 506

B HVAD

Evaluation of five artificial diets for the laboratory rearing of alfalfa weevil larvae. 545

The biology and behaviour of the European pine shoot moth Rhyacionia buoliana (Schiff.), in southern Ontario. II. Eggs, larva, and pupa. 567

Notes on two parasites attacking a Lema sp. (Coleoptera chrysomelidae). 572

Prolonged larval development in Buprestis aurulenta L. (Coleoptera: Buprestidae). A review with new cases. 612

Effect of spray volume and pressure on the control of larvae of the alfalfa weevil, Hypera postica, with conventional spray equipment. 630

Effects of protozoan parasites and commensals on larvae of the mosquito Aedes communis (DeGeer) (Diptera: culicidae) at Churchill, Manitoba. 669

Microorganisms from the mid-cut of the fourth-instar larvae of Culex tarsalis Coquillett. 682

Two genetic markers for larvae of the screw-worm fly. 699

The inheritance of larval color patterns in Neodiprion pratti Dyar (Hymenoptera: Diprionidae). 706

Evaluating the control of the clover root curculio larva on alfalfa. 1114

Parasites of the European pine shoot moth, Rhyacionia buoliana. 1127

Relative seasonal abundance of bollworm and tobacco budworm larvae on cotton in Georgia. 1134

Resistance of spring wheats to the wheat stem sawfly, Cephus cinctus Nort. (Hymenoptera: Cephidae II. resistance to the larva. 1136

The comparative preference of insects for glanded and glandless cottons. 1148

A sampling unit for the jack-pine budworm, Choristoneura pinus. 1156

Parasitization of corn earworm eggs on sweet corn silk in Southern California, with notes on larval infestations and predators. 1198

Biology of the banded cucumber beetle, Diabrotica balteata, in Louisiana. 1205

Larval growth as a method of screening Triticum sp. for resistance to the cereal leaf beetle. 1228

Control of Lichnanthe vulpina in cranberry bogs. 1252

Oiketicus kirbyi (Lepidoptera: Psychidae) a pest of bananas in Costa Rica. 1313

A modification of the Buchner funnel method for transferring and concentrating nematodes. 1315

The effect of hot water at different temperatures on larvae of various species of Meloidogyne. 1317

Dimensions of the clear areas in the skin of chicks that resulted from the feeding by larvae of two strains of Trombicula splendens at different periods. 1332

Experiments with homogenates of larvae of Trombicula splendens. 1333

In vivo studies of tissue reaction in chicks resulting from the feeding by larvae of Trombicula splendens. 1334

Differential susceptibility of maggots of several species to droppings from chickens fed insecticide-treated rations. 1359

Availability of dieldrin to adult Blissus leucopterus and larval Cyclocephala immaculata in treated sand, loam, and muck soils. 1418

Toxicity of some pesticides to eggs, larvae, and adults of the green lacewing, Chrysopa carnea. 1549

Field tests with new insecticides for control of alfafa weevil larvae in western Neraska. 1604

Effects of DDT, as used in black fly larval control, on

LARVICIDES

stream arthropods. 1626

Laboratory tests of insecticides on mosquito larvae in polluted and tap water. 1637

Evaluation of insecticides in the laboratory against adult and larval stable flies. 1655

Field experiments on insecticidal control of lepidopterous larvae on cabbage and cauliflower. 1690

Devices to facilitate rearing of Lepidopterous larvae. 1886

Rubber-bulb aspirators to handle minute insects. 1934

A squeeze device for detection of larvae of the sorghum midge, Contarinia sorghicola (Coquillet). 1950

LARVICIDES
Evaluation of some organic phosphate and carbamate insecticides against third-instar Green June Beetle larvae. 323

Larvicides for the control of house flies in poultry houses. 1327

Larvicide tests with colony-reared Culicoides variipennis. 1609

Control of house flies in outdoor privies with larvicides. 1636

LATE MONTMORENCY CHERRY
Dead button, a non-transmissible disorder of late Montmorency cherry. 1030

LATHYRUS ODORATUS
Some effects of temperature on the transmission of pea enation mosaic virus and on the biology of the pea aphid vector. 1009

LATRODECTUS MACTANS
Comparative lethality of several Latrodectus venoms. 1645

The effect of Latrodectus mactans tredecimguttatus venom on the endogenous activity of Periplaneta americana nerve cord. 1657

LAWN MOTHS
Control of lawn moths in southern california. 1147

LEAF BLIGHT (CORN)
Adaptation of the corn leaf blight fungus to a resistant and a susceptible corn host. 946

LEAF BLIGHT (ONIONS)
The apothecial stage of botrytis squamosa, cause of tip and leaf blight of onions. 887

LEAF BLIGHT (PLATANUS)
The early leaf and twig blight stage of sycamore anthracnose. 915

LEAF CAGE
A light-weight leaf cage for small arthropods. 1931

LEAF CURL (CITRUS)
Susceptibility of citrus varieties to leaf-curl virus. 962

LEAF CURL (COTTON)
Serious increase of cotton whitefly and virus transmission in Central America. 121

LEAF DISEASES
Watermelon disease incidence in central Florida, 1931-1959. 974

LEAF ENATION (CHERRIES)
Leaf enations in apple inoculated from cherry. 869

LEAF MINERS
Parasitism of the leaf miner Liriomyza munda in the winter garden area of Texas. 417

Tomato yields and leaf miner infestations and a sequential sampling plan for determining need for control treatments. 1269

LEAF ROLL (POTATOES)
Endosulfan, oxydemetonmethyl, and endrin in control of the green peach aphid and suppression of leaf roll in potatoes in eastern Washington. 1207

LEAF SPOT (CHERRIES)
Cercospora bunchosiae, a new leafspot disease of Barbados cherry. 757

LEAF SPOT (ONION)
Onion blast or leaf spotting caused by species of Botrytis. 979

LEAF SPOT (PEANUTS)
Leaf spot of peanut in georgia caused by Leptosphaerulina archidicola. 877

LEAF SPOT (SWEETPOTATOES)
The feathery mottle virus complex of sweetpotato. 834

LEAVES
Absence of young-leaf symptoms of psorosis in the state of Bahia, Brazil. 930

Foliage-feeding Lepidoptera on young nonbearing apple trees in Wisconsin. 1161

DNA content of Prunus leaf tissue. 1728

Effect of gibberellic acid on the extraction of protein from the leaves of spring vetches (Vicia satina L.). 1730

Health status of sisal plants (Agave sisiana) as related to soils and the mineral composition of their leaves. 1778

Sampling mites on peach leaves with the Henderson-McBurnie machine. 1959

LEGISLATION
The additives amendment in practice. 1457

LEMONS
Improved laboratory techniques for rearing California red scale on lemons. 645

Movement of Radopholus similis into rough lemon feeder roots and in soil, and its relation to Fusarium in the roots. 1290

Vaporized Dibrom for control of Drosophila in lemon storage houses. 1387

LENZITES TRABEA
Response of the eastern subterranean termite to an attractive extract from Lenzites trabea-invaded wood. 618

LEPIDOPTERA
Wing base structure in Lepidoptera. III. Taxomic characters. 209

Relationship of Lepidoptera light-trap collections to cotton field infestations. 1200

LEPTOSPHAERULINA ARCHIDICOLA
Leaf spot of peanut in georgia caused by Leptosphaerulina archidicola. 877

LESIONS (PLANTS)
Local lesions in psorosis. 745

LETHAL FACTOR
Comparative lethality of several Latrodectus venoms. 1645

The relationship between the hemorrhagic and lethal activities of japanese mamushi (Agkistrodon halys blomhoffii) venom. 1660

LETHANE 384
Insecticide residues:A procedure for the microdetermination of 1-butoxy-2-(2-thiocyanoethoxy)-ethane (Lethane 384) with applications for determination of residues in milk and animal tissues. 1465

LETTUCE
The natural enemies of the lettuce root aphid, Pemphigus. 21

Insecticide tests on the corn earworm as a pest of lettuce in Arizona. 420

Effect of chemical and microbial insecticides on several insect pests of lettuce in southern California. 604

Isolation of olpidium brassicae from roots of lettuce showing big-vein symptoms. 734

Two viruses that induce symptoms typical of June yellows in lettuce. 792

Radish yellows, a disease of radish, sugar beet and other crops. 793

Effects of temperature and moisture stress on the lettuce powdery mildew fungus. 975

Incidence of aster yellows in lettuce as affected by placement of systemic insecticides. 1217

Insecticide and microbial dusts and application intervals for control of lettuce insects. 1231

Aster yellows control in head lettuce and carrots in Prince Edward Island. 1248

LEUCOPHAEA MADERAE
In vivo oxidation of ronnel in the Madeiria cockroach. 446

LEWIS MITE
The lewis mite, Eotetranychus lewisi, on greenhouse poinsettia. 1101

LIFE CYCLE
Observations on the life history of Telenomus alsophilae, an egg parasite of the elm spanworm, Ennomos subsignarius. 30

Observations on the life history of the lessor cornstalk borer. 47

The pine root-cellar weevil, Hylobius radicis Buch., in southern Ontario. 58

The life history and ecology of the woolly pine needle aphid Schizolachnus pini-radiatae (Davidson) (Homoptera: Aphidae). 74

Overwintering females and the number of generations of Typhlodromus (T.) pyri Scheuten (Acarina:Phytoseiidae) in Nova Scotia. 88

The life history and habits of Scolytus unispinosus Leconte (Coleoptera: Scolytidae) in the interior of british Columbia. 148

Life-history studies and rearing techniques for the three-cornered alfalfa hopper. 150

Observations on the life history of the desert grasshopper (Trimerotropis pallidipennis pallidipennis) in laboratory and insectary cages. 284

Life history and habits of the green spruce leaf miner, Epinotia nanana (Treitschke) (Lepidoptera: Tortricidae). 352

Description and life history of Melanolophia imitata (Walker) (Lepidoptera: Geometridae. 375

Preliminary observations on the biology of Folsomia candida Willem, 1902 (Collembola: Isotomidae. 512

Life-history and behaviour of the predacious mite Typhlodromus (T.) caudiglans Schuster (Acarina: Phytoseiidae) in Ontario, with notes on the prey of related species. 570

Biology of mountain pine beetle, Dendroctonus monticuiae Hopkins, in the East Kootenay Region of British Columbia.I. Life cycle, brood development, and flight periods. 582

Life-history studies of Myzus persicae in Hawaii. 652

The life history of Platynota flavedana, a leaf roller of strawberry. 675

Life history, habits, and damage of the boxelder leaf gall midge, Contarinia negundifolia Felt (Diptera: Cecidomyiidae) in Michigan. 680

A microchamber for replicating photophases in diapause studies with the european corn borer. 1973

LIFE HISTORY
Life history and control of a casebearer, Chamaisus cribripennis (Coleoptera:Chrysomelidae), on blueberry. 256

LIFE-SPAN
Observations on emergence and life-span of wheat bulb fly, Leptohylemyia coarctata (Fall.) 361

LIGHT
Observations on the role of light, temperature, age, and sex in the response of screw-worm flies to attractants. 347

Variability in stem rust reactions of Kubanka wheat with light intensity and temperature. 892

Effect of light and humidity on the absorption and translocation of dimethoate in the cotton plant. 1165

LIGHT TRAPS
Orchard insect surveys with blacklight traps. 164

Potato leafhopper trapping studies to determine local flight activity. 176

Mating and reproductive history of blacklight-trapped cranberry fruitworm moths. 653

Seasonal light-trap collections of lepidopterous cotton insects in south Texas. 1120

Relationship of Lepidoptera light-trap collections to cotton field infestations. 1200

The response of cranberry fruitworm to black light. 1251

Some factors affecting the catches of Lepidoptera in light traps. 1877

Evaluation of a blower attachment for light traps. 1910

A walk-in light trap installation with a moth-beetle separator. 1917

A light trap for moths of Nacoleia dicemenalis. 1961

Tests with trap design and killing agents in black-light survey traps. 1963

Portable black-light trap battery and AC operation. 1966

LIGNIN
Fungistatic effects of lignin, lignin monomers, and model substances. 1764

LILIUM LONGIFLORUM
Granular phorate and Di-Syston for control of aphids on field-grown Easter lily. 1100

Effects of certain phosphorodithioate compounds upon populations of Pratylenchus penetrans. 1298

Effectiveness of chemical dip treatments on the culture of Croft lilies. 1741

LIMA-BEAN AGAR
Frozen-lima-bean agar for culture and storage of Phytophthora sojae. 762

LIME-SULFUR
Effects of the combination of sodium pentachlorophenoxide and liquid lime-sulfur on the brown-rot fungi. 924

LIMES
Tahiti lime bark disease is caused by exocortis virus. 967

LIMING
Alteration of the incidence of Botrytis cinerea on tomato by liming the soil. 1001

LIMONENE
Fungicide evalvation: Fungicidal activity of some new amino alcohols synthesized from citrus (+)-limonene. 1856

LINDANE

LINDANE
Failure of myo-inositol to prevent the growth-inhibiting effects of lindane in Periplaneta americana. 383

A field test of lindane for prevention and control of attack by Ips confusus (LeConte) (Coleoptera:Scolytide) in slash. 1242

Lindane and BHC in egg yolks following recommended uses for louse and mite control. 1364

Simultaneous quantitative determination of lindane and DDT gas chromatography. 1841

LIPIDS
Lipid content of the alfalfa weevil as related to seasonal activity. 291

LISSORHOPTRUS ORYZOPHILUS
Effect of nitrogen levels on rice water weevil populations. 12

Ovipositional habits of the rice water weevil California as related to a greenhouse evaluation of seed treatments. 410

Tests to determine varietal reaction to rice water weevil. 1073

Effect of common variables in rice production on rice water weevil control. 1221

LITTLE BLUE CATTLE LOUSE
Preliminary tests with insecticides for the control of the little blue cattle louse. 1682

LITTLE CHERRY (CHERRIES)
Flowering cherry, a reservoir of the little cherry virus. 1043

LIVESTOCK
Toxicological studies of compound VC 1-13 in livestock. 1367

Residues in body tissues of livestock sprayed with Sevin or given Sevin in the diet. 1446

Insecticide residues: Meat and milk residues from livestock sprays. 1447

Acute toxicity of Deinav and its residues in tissues of livestock. 1481

Preliminary studies of the toxicity of carbophenothion and methyl trithion in livestock. 1717

LIVESTOCK DISEASES
The rationale for medicated feeds. 1472

LIZARDS
Aedes aegypti feeds on lizards in Puerto Rico. 712

LOAM
Availability of dieldrin to adult Bilasus leucopterus and larval Cyclocephala immaculata in treated sand, loam, and muck soils. 1418

LOGS
Field selection of different log odors by scolytid beetles. 1083

LOLIUM PERENNE
Effects of nitrogen and potassium fertilizers on the mineral status of perennial ryegrass (Lolium perenne). I. Mineral content. 1785

Effects of nitrogen and potassium fertilizers on the mineral status of perennial ryegrass (Lolium perenne). II. Anion-cation relationship. 1786

LONE STAR TICKS
Studies on the removal of embedded lone star ticks Amblyomma americanum. 1349

LONGEVITY
The effects of various larval and adult diets on the fecundity and longevity of the bollworm, tobacco budworm, and cotton leafworm. 503

The effect of temperature fecundity and longevity of the black blow fly, Phormia regina. 558

A note on the longevity and behaviour of adult golden buprestids, Buprestis aurulenta L. (Coleoptera: Buprestidae under artificial conditions. 614

LOOSE SMUT (OATS)
Hosts for differentiating oat loose-smut races of the southeastern United States. 872

LOOSE SMUT (WHEAT)
Root and shoot development of wheat infected with loose smut, Ustilago tritici. 882

LOPHODERMIUM APOTHECIA
Lophodermium needle cast of the eastern white pine. 732

LOUISIANA
Two new species of coniferous needle miners from Louisiana and the description of a new genus (Lepidoptera: Gelechiidae). 62

Seasonal occurrence of Heliothis larvae on cotton in. 71

Studies on the biological control of the fall webworm, Hyphantria cunea, in Louisiana. 168

Critical period for controlling the sugarcane borer in sugarcane in Louisiana. 1167

The effect of horse fly control on rate of infection of bovine anaplasmosis under field conditions in Louisiana. 1365

LOW-VOLUME CONCENTRATE
Portable sprayer for aerial LVC applications. 1900

LOXAGROTIS ALBICOSTA
The biology and control of the western bean cutworm in dent corn in Nebraska. 412

LUMBER PRESERVATIVES
Toxicology of wood preservatives to swine. 1685

LUPINE
Phytophthora root and stem rot of lupines. 845

LUTEOARSENOTUNGSTIC ACID
Determination of residual 4-dimethylamino-3,5-xylyl methylcarbamate and 4-dimethylamino-3,5-xylenol by use of luteoarsenotungatic acid. 1497

LYCOPERSICON
Four pathogenic strains of TMV on tomato. 890

LYCOPERSICON PERUVIANUM
Tomato, Lycopersicon esculentum, and Lycopersicon species and genetic markers in relation to mite, Tetranychus marianae, infestations. 1270

LYDELLA GRISESCENS
A relationship of the plant to parasitism of european corn borer by the Tachinid parasite Lydella Grisescens. 1116

LYDELLA STABULANS GRISESCENS
The re-introduction and recovery of lydella stabulans grisescens, a parasite of the european corn borer in Delaware. 230

LYGUS BUGS
The influence of certain biological and environmental factors on insecticide tolerance of the lygus bug, Lygus hesperus. 274

Further studies of damage to safflower plants by thrips and lygus bugs. 1080

Damage to safflower plants by thrips and lygus bugs and a study of their control. 1081

LYGUS LINEOLARIS
Field insecticide tests against several cotton pests. 563

LYMPH NODES
Bone-taint in beef.- II. Bacteria in ischiatic lymph nodes. 1325

MACROPHOMINA PHASEOLI
Thermal death range of sclerotia of Macrophomina phaseoli. 741

MACROSIPHUM AVENAE
Effect of foliage infestation of the english grain aphid on yield of triumph wheat. 1275

MACROSIPHUM EUPHORBIAE
Development, survival and fecundity of the potato aphid Macrosiphum euphorbiae (Thomas), at constant temperatures. 281

Entomophthoraceous fungi attacking the potato aphid in northeastern Maine in 1960. 983

Insecticidal field trials for the control of potato aphids in New Brunswick, 1948-60. 1206

MACROSTELES FASCIFRONS
Spring migration of the six-spotted leafhopper in the Western Great Plains. 667

Host plant preference of the six-spotted leafhopper. 1257

MAGGOTS
Control of root maggots on radish, turnip, and rutabaga in Wisconsin. 1099

Comparison of soil surface treatments of some fumigants and soil insecticides for apple maggot control. 1179

Differential susceptibility of maggots of several species to droppings from chickens fed insecticide-treated rations. 1359

MAGICICADA SEPTENDECIM
Chemical control of periodical cicada, Magicicada septendecim, on apples in North Carolina. 1401

Effect of soil applications of nematocides on emergence of periodical cicada. 1407

Screening insecticides for control of the adult periodical cicada. 1597

MAGNOLIA
Lygus hesperus as an economic insect on magnolia nursery stock. 1152

MAGNOLIA FUSCATA
Toxicity of PCNB to Magnolia fuscata. 1720

MAGNOLIA GRANDIFLORA
An angular leaf spot of Magnolia grandiflora caused by Isariopsis sp. 825

MAINE
Control of the blueberry thrips in Maine. 303

MAINTENANCE
A method of repointing insect dissecting forceps. 1889

MALACOSOMA AMERICANUM
Natural control of the eastern tent caterpillar and notes on its status as a forest pest. 1157

MALACOSOMA DISSTRIA
Outbreaks of the forest tent caterpillar, Malacosoma disstria Hbn., a periodic defoliator of broad-leaved trees in Ontario. 214

MALE ANNIHILATION
Control of pink bollworms by male annihilation. 402

MALTING BARLEY
Determination of endogenous gibberellins in green malt by isotopic, derivative dilution procedures. 1843

MAMMALIAN METABOLISM
Mammalian and insect metabolism of the chemosterilant Thiotepa. 1666

MAMMALS
Species of Hippelates (Diptera: Chlorpidae) gnats collected from mammals. 1346

MANDUCA QUINQUEMACULATA
Effect of pre-emergence rainfall on population size in the tobacco hornworm. 93

Preliminary studies on mass rearing of the tobacco hornworm. 441

Laboratory rearing of the tobacco hornworm, Protoparce sexta (Lepidoptera: Sphingidae). 664

MANEB
The effect of manganese ethylene bisdithiocarbamate (Maneb) on some chemical constituents of Colletotrichum capsici. 1654

MANGOES
Within-package ethylene dibromide fumigation of mangoes and grapefruit in fiberboard cartons to destroy Mexican fruit fly infestations. 1392

MANITOBA
Adult Elateridae of southern Alberta, Saskatchewan and Manitoba (Coleoptera). 14

Seasonal and geographical distribution of Tabanidae (Diptera) in Manitoba, based on females captured in traps. 77

Effects of protozoan parasites and commensals on larvae of the mosquito Aedes communis (DeGeer) (Diptera: culicidae) at Churchill, Manitoba. 669

The painted leafhooper, Endria inimica (Say), a vector of wheat striate mosaic virus in Manitoba. 673

MANURES
The growing and manuring of tea. 1731

MAPS
A critical appraisal of grasshopper forecast maps in Saskatcewan, 1936-1958. 51

MARITIME PROVINCES
A survey of the sucking insects of the birches in the Maritime Provinces. 232

MARQUIS WHEAT
A toxin extracted from Marquis wheat infected by race 38 of the stem rust fungus. 991

MARYLAND
Occurrence of asiatic oak weevil in alfalfa and red clover in maryland. 101

MASS REARING
Oviposition and fecundity of boll weevils in mass rearing laboratory cultures. 325

Technique for mass rearing of the pink bollworm by infesting diet medium with eggs. 584

MASS REPRODUCTION
Techniques for mass-producing Coccinella septempunctata. 600

MASSACHUSETTS
Disappearance of guthion from forage crops in Massachusetts. 1519

MATHEMATICAL ANALYSIS
Mathematical models for use in insect pest control. 1981

MATING
Studies on sod webworms. I. Emergence rhythm, mating, and oviposition behavior under natural conditions. 279

Uptake, transfer, and loss of P32 during metamorphosis, mating, and oviposition in Aedes vexans. 575

Mating and reproductive history of blacklight-trapped cranberry fruitworm moths. 653

Florescent dyes for mating and recovery studies with cabbage looper moths. 659

MATING HABITS
The effects of gamma radiation on mating competitiveness and fecundity of Hippelates pusio Loew. 381

Mating habits of the stable fly. 426

MATURATION

Effects of some chemosterilants on the viability of eggs, fecundity, mortality, and mating of the cabbage looper. 1615

MATURATION
Group effects on feeding in adult males of the desert locust Schistocerca gregaria (Forsk.), in relation to sexual maturation. 553

MAURITIUS
The control of black sage (Cordia macrostachya) in Mauritius: the introduction, biology and bionomics of a. species of Eurytoma (Hymenoptera, Chalcidoidea). 249

MAYETIOLA DESTRUCTOR
Hessian fly larval strain responses to simulated weather conditions in the greenhouse and laboratory. 414

Controlling hessian fly with phorate and disulfoton. 1072

MAZZARD CHERRIES
Juice transmission of cucumber mosaic virus to mazzard and mahaleb cherry. 923

MAZZARD SEEDLINGS
Susceptibility of mazzard seedlings to Pseudomonas syringae. 764

MEASUREMENT
The automatic measurement of fumigant concentrations. 1935

The dye-tracer methods measuring aerial spray deposits in forest insect research. 1990

MEASURING EQUIPMENT
Improved hydrostatic pressure gauge methods for measuring oleoresin exudation pressure in bark beetle research. 1871

MEAT
Residues in body tissues of livestock sprayed with Sevin or given Sevin in the diet. 1446

Insecticide residues: Meat and milk residues from livestock sprays. 1447

Insecticide residues in meat and milk: determination of heptachlor epoxide in fat and milk. 1501

MECHANICS
Mechanics of infrared cinematography in studies with the european corn borer. 1974

MELAMPSORA LINI
Asexual variants of Melampsora lini. 801

MELANOPLUS DIFFERENTIALIS
Tests for parthenogenesis in migratory, differential, and desert grasshoppers. 285

MELANOPLUS SANGUINIPES
Further tests of the effect of food plants on the migratory grasshopper. 283

Tests for parthenogenesis in migratory, differential, and desert grasshoppers. 285

Toxicity of the dialyzable fraction of the venom of the yellow scorpion, Leirus quinquestriatus, to the migratory locust. 1632

MELIOLACEAE
Morphology and host range of a subterranean member of the Meliolaceae. 816

MELOIDAE
Blister beetles on glandless cotton. 1184

MELOIDOGYNE
Meloidogyne from Taiwan and New Delhi. 1283

The effect of hot water at different temperatures on larvae of various species of Meloidogyne. 1317

MELOIDOGYNE ARENARIA
Population development of Meloidogyne arenaria in red clover. 1281

MELOIDOGYNE INCOGNITA ACRITA
Resistance to the root-knot nematode, Meloidogyne incognita acrita, in upland cotton seedlings. 1280

MELOIDOGYNE INCOGNITA INCOGNITA
Physiological and biochemical studies on nematode galls. 1308

MELOPHAGUS OVINUS
Further tests with power dusting to control the sheep ked. 1353

MELTING OUT (KENTUCKY BLUEGRASS)
Broad spectrum fungicides tested for control of melting-out of Kentucky bluegrass and Sclerotinia dollar spot of Seaside bentgrass. 779

MEMBRACIDAE
Life-history and behavioral studies on Micrutalis malleifera, a vector of pseudo-curly top virus. 609

The pseudo-curly top disease in south Florida. 992

MENACANTHUS STRAMINEUS
Co-ral as a litter and nest dust to control the chicken body louse. 1348

Family differences in attractiveness of poultry to the chicken body louse, Menacanthus stramineus (Mallophaga). 1354

MENAZON
Menazon as a systemic insecticide in cattle. 1603

MENTAL DISORDERS
Persistent psychiatric symptoms from exposure to organophosphate insecticides. 1694

MENTHA ARVENSIS
Systemic fungicides:The translocation and persistence of tritium-labeled cycloheximide in eastern white pine seedlings. 1759

MENTHA PIPERITA
Insecticide residues in peppermint and their distillation with peppermint oil. 1526

Systemic fungicides:The translocation and persistence of tritium-labeled cycloheximide in eastern white pine seedlings. 1759

MERMITHIDS
Infestation of overwintering nymphs of Chortophaga viridifasciata by mermithids. 299

MERULIUS LACRYMANS
The effects of environmental conditions on the growth of Merulius lacrymans. 787

MESSOR
Biological activities of the harvester ant, Pogonomyrmex owyheei, in central Oregon. 679

METABOLISM
Metabolism of labeled glutamic acid in adult German cockroaches. 511

The metabolism of P32-labeled Clodrin in a lactating goat. 1329

Metabolism of and residues associated with dermal and intramuscular application of radiolabeled Fenthion to dairy cows. 1350

Metabolism of two forms of dietary arsenic by the rat. 1503

Metabolic stability of radioactive arsanilic acid in chickens. 1510

DDT- METABOLISM and excretion in Coleomegilla maculata De Geer. 1544

Metabolism, storage, and excretion of C14-endosulfan in the mouse. 1586

Absorption, excretion, and metabolism of a new antibacterial agent, nalidixic acid. 1643

Metabolism of arsanilic acid. I. Metabolic stability of

doubly labeled arsanilic acid in chickens. 1663

Metabolism of arsanilic acid. II. Localization and type of arsenic excreted and retained by chickens. 1664

Penetration and metabolism of DDT in resistant and susceptible house flies and the effect on latent toxicity. 1684

The metabolism of dehydroacetic acid (DHA). . 1810

Symposium on metabolism of herbicides. 1828

The fate of cyanamide in cotton. 1851

METABOLITES
Insecticide residues in milk: Determination of methoxychlor and or metabolites in milk following topical application to dairy cows. 1448

Insecticide residues:Determination of residues of phorate and its insecticidally active metabolities by cholinesterase inhibition Part I. Basic method Part II. Alternative sample preparation and recovery data. 1450

Insecticide residues: Persistance of dimethoate and metabolites following foliar application to plants. 1451

Insecticide residues: Colorimetric determination of residues of phorate and its insecticidally active metabolites. 1464

Identification of the metabolites of 3,5-dinitro-o-toluamide -C14 (Zoalene) in chicken tissues. 1862

The identification of 3,5-dinitro-o-toluamide (Zoalene) and possible metabolites by paper chromatography. 1863

METALDEHYDE
A modified analytical method for microgram amounts of metaldehyde in plant material. 1485

METAMORPHOSIS
Uptake, transfer, and loss of P32 during metamorphosis, mating, and oviposition in Aedes vexans. 575

METEPA
A comparison of the amounts of metepa required to sterilize the screw-worm fly and the stable fly. 326

Quantitative effects of tepa, metepa, and apholate on sterilization of male house flies. 328

Uptake of metepa and its effect on two species of mosquitoes (Anopheles quadrimaculatus, Aedes aegypti) and house flies (Musca domestica). 350

Sterilization of pink bollworm adults with metepa. 369

Egg viability and longevity of japanese beetles treated with tepa, apholate, and metepa. 485

Metabolism of methaphoxide in mosquitoes, house flies, and mice. 565

Insect sterilant experiments in outdoor cages with apholate, metepa, and four bifunctional aziridine chemicals against the house fly. 1675

METHOXYCHLOR
Control of the alfalfa weevil, Hypera postica, in N.Y. 1064

Insecticide residues in milk: Determination of methoxychlor and or metabolites in milk following topical application to dairy cows. 1448

Methoxychlor in eggs and chicken tissues. 1508

METHYL BROMIDE
Tolerance of some imported vegetables to methyl bromide fumigation and hot water treatments. 721

Dosage applied and concentration obtained in the funigation of various commodities with methyl bromide. 1390

Tolerance of imported garlic bulbs to methyl bromide fumigation and hot-water dips. 1396

Methyl bbromide, sulfuryl fluoride, and other fumigants against quarantinable Cochliicella and Theba snails. 1678

The influence of oil content on the susceptibility of seeds to fumigation with methyl bromide. 1726

METHYL TRITHION
Preliminary studies of the toxicity of carbophenothion and methyl trithion in livestock. 1717

METHYL-PHENYL N-METHYLCARBAMATES
Carbamate insecticides: multisubstituted chloro-and methyl-phenyl n-methylcarbamates. 1647

MEVINPHOS
Insecticide effects on animals:Response of experimental animals to Phosdrin insecticide in their daily diets. 1573

Effectiveness of insecticides against the sorghum webworm in sorghum heads. 1613

MEXICO
Recent research on the boll weevil in northern Sonora, Mexico, and the thurberia weevil in arizona. 11

Pink bollworm resistance to DDT in the Laguna area of Mexico. 330

Investigations of pink bollworm resistance to DDT in Mexico and the United States. 501

Quarantine problems associated with the importation of bananas from Mexico. 794

Mexico-United States cooperative plant pest control programs. 1090

MICE
Metabolism of methaphoxide in mosquitoes, house flies, and mice. 565

Specificity of carbamate induced esterase inhibition in mice. 1547

Metabolism, storage, and excretion of C14-endosulfan in the mouse. 1586

MICHIGAN
Life history, habits, and damage of the boxelder leaf gall midge, Contarinia negundifolia Felt (Diptera: Cecidomyildae) in Michigan. 680

Chlorinated hydrocarbon insecticide residues in soils of urban areas,Battle Creek, Michigan. 1459

MICROANALYSIS
Herbicide residues: Colorimetric microdetermination of 1-chloro-2-nitrobenzene in pineappie. 1536

Feed additives analysis: Microanalysis of piperazine. 1811

MICROBIAL INSECTICIDES
Bioassay of Bacillus thuringiensis-based microbial insecticides. III. Continuous propagation of the salt-marsh caterpillar, Estigmene acrea. 367

Encapsulation as a technique for formulating microbial and chemical insecticides. 1676

MICROBIOLOGICAL DEGRADATION
Microbiological degradation of thiram. 1857

MICROBIOLOGY
Microbiological degradation of thiram. 1857

MICROFLORA
Growing seedlings free of air-borne microflora. 1938

MICROORGANISM ISOLATION
Isolation of olpidium brassicae from roots of lettuce showing big-vein symptoms. 734

MICROORGANISMS
Microorganisms from the mid-gut of larval and adult Culex quinquefasciatus Say. 329

Effect of chemical and microbial insecticides on several insect pests of lettuce in southern California. 604

MICROSCOPY

The duration of viability and infectivity of certain insect pathogens. 626

Microorganisms from the mid-cut of the fourth-instar larvae of Culex tarsalis Coquillett. 682

Variation in maize seedling blight symptoms with changes in pathogen species, isolate and host genotype. 857

Influence of fungicides on microorganisms associated with apparently healthy strawberries. 1026

Insecticide and microbial dusts and application intervals for control of lettuce insects. 1231

MICROSCOPY
A new drawing aid. 1978

MICROSOMES
Improvements in the methods of preparation and storage of house fly microsomes. 596

Stimulatory effects of chlordane on hepatic microsomal drug metabolism in the rat. 1610

The hydroxylation of naphthalene-1-C14 by house fly microsomes. 1809

MICROSPORIDIA
Nosema phryganidiae n. sp., a microsporidian parasite of Phryganidia californica Packard. 494

A list and brief description of the Microsporidia infecting insects. 648

Observations on the emergence of the microsporidian sporoplasm. 1755

MICROSPORIDIAN SPORES
Electron microscope study on the cytology of a microsporidian spore by means of ultrathin sectioning. 1930

MICROTOMY
Electron microscope study on the cytology of a microsporidian spore by means of ultrathin sectioning. 1930

MIDWEST
Field studies of European corn borer biotypes in the Midwest. 216

MILK
Some effects of pH and milk on tobacco mosaic virus. 829

Residues of endosulfan in meat and milk of cattle fed treated forages. 1432

Insecticide residues: Meat and milk residues from livestock sprays. 1447

Insecticide residues in milk: Determination of methoxychlor and or metabolites in milk following topical application to dairy cows. 1448

Determination of furaltadone in milk. 1449

Residues of Sevin in whole milk from sprayed and dusted cows. 1455

Determination of micro amounts of isopropyl N-(3-chlorophenyl)carbamate.(CIPC) in milk and urine excreted from dairy cows. 1461

Insecticide residues in milk: The effects of feeding high levels of Sevin on residue, flavor, and odor of the milk of dairy cattle. 1471

Residues of heptachlor epoxide and telodrin in milk from cows fed at part per billion insecticide levels. 1473

Herbicide residues in milk:Form and magnitude of 2,2-dichloropropionic acid (dalapon) residues in milk. 1489

Insecticide residues in meat and milk: determination of heptachlor epoxide in fat and milk. 1501

Determination of strontium-90 in milk by an ion exchange method. 1512

Insecticide residues in milk: Excretion of Co-Ral in the milk of dairy cattle. 1513

Determination of trace amounts of nitrofurazone in milk. 1529

Radionuclides in milk. 1563

MILK ANALYSIS
Insecticide residues in milk: Determination of methoxychlor and or metabolites in milk following topical application to dairy cows. 1448

Radionuclides in milk. 1563

MILK FAT
Forced volatilization cleanup of butterfat for gas chromatographic evaluation of organochlorine insecticide residues. 1509

MILLED WHEAT
Recovery of ethylene dibromide residues from fumigated whole kernel and milled wheat fractions. 1522

MINERALIZATION (NUTRIENTS)
A note on the effects of some soil sterilants on the mineralisation and nitrification of soil-nitrogen. 1410

MINERALS
Study of some mineral mixtures designed for dairy cows. 1324

The effect of mineral nutrition on spore germination and growth responses in Aspergillus niger and some other fungi. 1771

Health status of sisal plants (Agave sisiana) as related to soils and the mineral composition of their leaves. 1778

Effects of nitrogen and potassium fertilisers on the mineral status of perennial ryegrass (Lolium perenne). I. Mineral content. 1785

Effects of nitrogen and potassium fertilisers on the mineral status of perennial ryegrass (Lolium perenne). II. Anion-cation relationship. 1786

MINERS
Two new species of coniferous needle miners from Louisiana and the description of a new genus (Lepidoptera: Gelechiidae). 62

MINKS
Control of mink myiasis caused by the larvae of Wohlfahrtia vigil. 1322

MINNESOTA
Development of resistance to insecticides by the onion maggot, Hylemya antiqua, in Minnesota. 561

Some sap-stain fungi found in Minnesota. 765

MIRIDAE
Control of plant bugs and other insects on Kentucky bluegrass grown for seed. 1244

MISSISSIPPI
Effects of the fall environment of the boll weevil in northeast Mississippi. 85

A large-scale field evaluation of boll weevil diapause control in Mississippi. 522

Investigations of the possibility of host specific strains of the bollworm and tobacco budworm in mississippi. 619

MISSOURI
Biological observations on the european corn borer in southeastern missouri. 449

MITES
Susceptibility to acaricides of the mite Tetranychus cinnabarinus infesting cotton in Egypt. 372

Effects of some antibiotics and other compounds on fertility and mortality of orchard mites. 421

Present status in control of the European red mite in Ohio with summer acaricides. 1113

Relations between Typholdromus caudiglans Schuster (Acarina: PHYTOSEIIDAE) and phytophagous mites in Ontario peach

orchards. 1209

Tomato, Lycopersicon esculentum, and Lycopersicon species and genetic markers in relation to mite, Tetranychus marianae, infestations. 1270

Lindane and BHC in egg yolks following recommended uses for louse and mite control. 1364

The control of mites on deciduous fruit crops with binapacryl. 1542

Chemical structure and toxicity of some carbamoyloxy phosphorodithioates to susceptible and organophosphorus-resistant strains of mites. 1628

Photography in mite counting. 1872

Adhesives for holding mites to glass plates. 1892

A heating apparatus for conducting feeding experiments with blood-sucking mites. 1895

Sampling mites on peach leaves with the Henderson-McBurnie machine. 1959

MODEL ORGANIC COMPOUNDS
Insect pheromone collection with absorption columns. I. Studies on model organic compounds. 607

MOLDS
Effect of temperature on post-harvest decay of blueberry varieties. 1376

Deterioration of stored feedstuffs: Relation of interspace relative humidity to growth of molds and heating of feed ingredients and feed mixtures. 1377

MOLECULAR SIZE
Herbicidal activity: Molecular size vs. herbicidal activity of anilides. 1625

MOLYBDOARSENIC ACID
Herbicide residues: Determinations of small amounts of arsenic in potatoes. Extraction and reduction of molybdoarsenic acid. 1493

MOORLAND
The flight of Culicoides impunctatus Goetghebuer (Diptera, Ceratopogonidae) over moorland and its bearing on midge control. 114

MORATORVIRUS LAMELLICORNIUM
A virus disease of Coleopterous insects. 479

MORESTAN
Colorimetric determination of 6-methyl-2,3-quinoxalinedithiol cyclic carbonate (Morestan) residues in apples and pears. 1476

MORPHOLOGY
Morphological differentiation of spherical viruses by electron microscopy. 1004

MORTALITY
Sexual aggressiveness of male screw-worm flies measured by effect on female mortality. 290

Effects of some antibiotics and other compounds on fertility and mortality of orchard mites. 421

Mortality and fertility response of Musca domestica adults to certain known mutagenic or anti-tumor agents. 477

Dosage-mortality data on the bollworm, Heliothis zea, and the tobacco budworm, Heliothis virescens, in Oklahoma. 493

Mortality of bumble bees in commercial low-bush blueberry fields dusted with calcium arsenate. 1535

Effects of some chemosterilants on the viability of eggs, fecundity, mortality, and mating of the cabbage looper. 1615

Spray deposit on oil-sensitive cards and spruce budworm mortality. 1641

Use of radiography to detect mortality of California flatheaded borers in pine bark. 1986

MORTALITY (INSECTS)
A method to determine progressive mortality during seasonal development of Douglas-fir beetle brood. 64

MOSAIC (ALFALFA)
Alfalfa mosaic virus in soybean. 726

The antigenic characteristics and the relationship among strains of alfalfa mosaic virus. 731

Specific infectivity changes with alfalfa mosaic virus. 862

Vein necrosis, another systemically infectious strain of alfalfa mosaic virus in bean. 1053

MOSAIC (BEAN YELLOW)
Clones of red clover resistant to four isolates of bean yellow mosaic virus. 784

MOSAIC (BEANS)
The role of alternate plant hosts in the aphid transmission of bean mosaics in central Washington. 948

MOSAIC (BROMUS)
Datura stramonium and Chenopodium hybridum as semiquantitative assay hosts for bromegrass mosaic virus. 773

Serological and biological properties of brome mosaic virus antigens. 827

MOSAIC (CABBAGE)
Some effects of temperature on the transmission of cabbage mosaic virus by Myzus persicae. 1008

MOSAIC (CAULIFLOWER)
Purification and properties of cauliflower mosaic virus. 936

MOSAIC (CUCUMBERS)
Juice transmission of cucumber mosaic virus to mazzard and mahaleb cherry. 923

MOSAIC (CYMBIDIUM)
Purification by density-gradient centrifugation, electron microscopy, and properties of Cymbidium mosaic virus. 777

MOSAIC (LETTUCE)
Transmission of lettuce mosaic virus by a new vector, Pemphigus bursarius. 886

MOSAIC (SWEETPOTATOES)
Additional evidence that sweetpotato mosaic virus is a strain of tobacco mosaic virus. 988

MOSAIC (SWITCHGRASS)
Additional characteristics of Panicum mosaic virus. 987

MOSAIC (TOBACCO)
Inactivation of TMV from tomato seed. 725

Field occurrence of tobacco mosaic virus in tomato and Chenopodium murale. 730

Some effects of pH and milk on tobacco mosaic virus. 829

Four pathogenic strains of TMV on tomato. 890

Influence of boron nutrition of Nicotiana tabacum on the multiplication of tobacco mosaic virus. 984

Mutual exclusion of strains of tobacco mosaic virus. 985

Additional evidence that sweetpotato mosaic virus is a strain of tobacco mosaic virus. 988

The effect of tobacco mosaic virus on tomato yield. 1037

Time of appearance and size of local lesions produced by two strains of tobacco mosaic virus. 1040

Competition between two strains of tobacco mosaic virus (TMV) on leaves of Nicotiana glutinosa. 1049

MOSQUITO FISH
Susceptibility and resistance of mosquito fish to several insecticides. 1405

MOTHS

MOTHS
Inhibition of reproduction of Indian meal-moths, Plodia interpunctella, by exposure to amplified sound. 473

Sex pheromones of noctuid moths. I. A quantitative bioassay for the sex pheromone of trichoplusia ni (Lepidoptera: noctuidae). 605

A walk-in light trap installation with a moth-beetle separator. 1917

A light trap for moths of Nacoleia dicemenalis. 1961

A holding cage and handling device for noctuid moths. 1972

A photoelectric counter to monitor olfactory response of moths. 1975

MUCK SOILS
The survival of Verticillium albo-atrum in muck soils. 1411

Availability of dieldrin to adult Blissus leucopterus and larval Cyclocephala immaculata in treated sand, loam, and muck soils. 1418

MUSCA AUTUMNALIS
Studies of Aleochara tristis (Coleoptera: Staphylinidae), a natural enemy of the face fly. 45

Face fly oviposition studies. 357

Face fly control studies in West Virginia in 1960-1961. 364

Attempted propagation of Nasonia vitripennis on the face fly. 413

Face fly dispersal, nocturnal resting places, and activity during sunset as observed in 1963. 471

Comparative insecticidal susceptibility of field-collected and laboratory-reared face flies, Musca autumnalis. 591

Effect of bovine diet on face fly development - A preliminary report. 654

Susceptibility of mature and newly emerged face flies to chemosterilization with apholate. 700

Face fly and horn fly control on cattle - 1962-1964. 1337

Tests against face flies on cattle in New Jersey during 1961. 1344

Free choice feeding of ronnel mineral block and granules for face fly, horn fly, and cattle grub control. 1347

Low level feeding of ronnel in a mineral salt mixture for area control of the face fly, Musca autumnalis. 1362

Experiments for control of the face fly in Virginia. 1363

Horn fly and face fly control studies with Dow M-1816. 1634

Dusting stations and cable backrubbers as self-applicatory devices for control of the face fly. 1915

MUSCA DOMESTICA
House fly breeding in oak sawdust and peanut hulls used as bedding in calf pens. 135

Further studies on techniques for sampling the density of African house fly populations. 1. A field comparison of th use of the Scudder grill and the sticky-flytrap method for sampling the indoor density of African house flies. 185

Chemosterilization and mating behavior of male house flies. 327

Quantitative effects of tepa, metepa, and apholate on sterilization of male house flies. 328

Uptake of metepa and its effect on two species of mosquitoes (Anopheles quadrimaculatus, Aedes aegypti) and house flies (Musca domestica). 350

A comparison of the sterols in resistant and susceptible house flies, Musca domestica. 374

Compounds causing sterility in adult house flies. 387

Sexual acceptability of laboratory strains of male house flies in competition with wild strains. 388

A field experiment with apholate as a chemosterilant for the control of house flies. 399

Chemosterilization of house flies by treatment in the pupal stage. 400

A comparison of techniques for screening chemosterilants of house flies and screw-worm flies. 401

Effects of apholate on restricted populations of insecticide-resistant house flies, Musca domestica. 416

The effects of 5-fluorouracil on the viability of house fly eggs. 468

Insect chemosterilants: incorporation of 5-fluorouracil into house fly eggs. 469

Olfactory and oviposition responses of the house fly to domestic manures, with notes on an autogenous strain. 486

The effect of apholate on the ovarian development of house flies. 534

Dispersion of insecticide-resistant populations of the house fly, Musca domestica L. 535

Effect of three chemosterilants on house fly longevity and sterility. 542

An inbreeding method of rearing the house fly. 543

Temporary and permanent sterilization of house flies with chemosterilants. 557

Metabolism of methaphoxide in mosquitoes, house flies, and mice. 565

Improvements in the methods of preparation and storage of house fly microsomes. 596

Hydroxylation as a factor in resistance in house flies and blow flies. 597

Larvicides for the control of house flies in poultry houses. 1327

Residual sprays for the control of house flies in field tests. 1439

Inhibition of cholinesterase and ali-esterase in parathion and paraoxon poisoning in the house fly. 1552

Temperature effects on toxicity of synergized carbamate insecticides on house flies. 1593

The synergism of substituted phenyl N-methylcarbamates by piperonyl butoxide. 1600

Effects of apholate on a restricted population of house flies. 1608

Control of house flies in outdoor privies with larvicides. 1636

Chemosterilization of house flies fed certain ethylenimine derivatives. 1665

Insect sterilant experiments in outdoor cages with apholate, metepa, and four bifunctional aziridine chemicals against the house fly. 1675

Penetration and metabolism of DDT in resistant and susceptible house flies and the effect on latent toxicity. 1684

The hydroxylation of naphthalene-1-C14 by house fly microsomes. 1809

Specificity of diarylhaloethane-dehydrohalogenase of susceptible and DDT-RESISTANT house flies. 1812

Insecticidal properties of some diethyl nitronaphthyl phosphates. 1832

New devices for rearing and handling house flies in the laboratory. 1924

MUSCLES
The relationship between the hemorrhagic and lethal activities of japanese mamushi (Agkistrodon halys blomhoffii) venom. 1660

MUSHROOM FLY
Tests with dichlorvos vapors for the control of mushroom flies. 1696

MUTAGENIC AGENTS
Mortality and fertility response of Musca domestica adults to certain known mutagenic or anti-tumor agents. 477

MUTATION
Induced color mutants in Rhynchosporium secalis. 1754

Mutation for pathogenicity in Puccinia graminis var. tritici. 1791

MYCELIA
A seedling test for detecting viable Ustilago nuda mycelium following barley seed treatments. 899

MYCOFLORA
The mycoflora of peanuts in storage. 1403

MYCOLOGY
Kansas aeromycology, VII. Smuts. 927

MYCOTOXICOSIS
Mycotoxins II. The biological assay of aflatoxin in Peking white ducklings. 1543

MYIASIS
Control of mink myiasis caused by the larvae of Wohlfahrtia vigil. 1322

MYRISTICIN
Myristicin, an insecticide and synergist occurring naturally in the edible parts of parsnips. 1164

MYROTHECIUM RORIDUM
A Myrothecium rot of gloxinias. 1767

MYZUS PERSICAE
Note on the movements of the mandibular and maxillary stylets of the aphid, Myzus persicae (Sulzer). 13

Insecticide experiments to control green peach aphid and pepper weevil on peppers. 373

Green peach aphid distribution and potato leafroll virus occurrence in the seed-potato producing areas of Idaho. 744

Transmission of papaya mosaic virus by the green peach aphid. 909

Endosulfan, oxydemetonmethyl, and endrin in control of the green peach aphid and suppression of leaf roll in potatoes in eastern Washington. 1207

Effect of insecticides on the green peach aphid, Myzus persicae (Sulzer), infesting burley tobacco. 1249

N-ALKYL TOLUAMIDES
N-alkyl toluamides in cloth as repellents for mosquitoes, ticks, and chiggers. 394

N-DODECYLGUANIDINE ACETATE
Mechanisms of fungitoxic action of n-dodecylguanidine acetate. 1559

N-METHYLCARBAMATE
Insecticidal carbamates:comparison of the activities of N--methyl and N,N-dimethylcarbamates of various phenols. 1649

N-N-DIMETHYLCARBAMATE
Insecticidal carbamates:comparison of the activities of N--methyl and N,N-dimethylcarbamates of various phenols. 1649

N,N-DIETHYLTOLUAMIDE
Quantitative gas chromatography of isomers of insect repellent N,N-diethyltoluamide. 1805

NALED
Irritation of naled mist sprays to cattle. 1366

Vaporized Dibrom for control of Drosophila in lemon storage houses. 1387

Toxicity of Dibrom vapors to greenhouse insects. 1406

NALIDIXIC ACID
Absorption, excretion, and metabolism of a new antibacterial agent, nalidixic acid. 1643

NAPHTHALENE
The hydroxylation of naphthalene-1-C14 by house fly microsomes. 1809

NAPHTHALENEACETIC ACID
Residue determination of naphthaleneacetic acid in olives. 1537

NASONIA VITRIPENNIS
Attempted propagation of Nasonia vitripennis on the face fly. 413

NATIVE HOLLY LEAF MINER
Control of the native holly leaf miner, Phytomyza ilicicola (Diptera: Agromyzidae). 1158

NATURAL CONTROL (INSECTS)
Observations on the natural control of the pear psylla, Psylla pyricola Forster, in California. 140

Natural biotic control factors of the eye-spotted bud moth, Spilonota ocellana on apple in Wisconsin. 1162

NEBRASKA
Holocyclic strain of the spotted alfalfa aphid in Nebraska and adjacent states. 141

The biology and control of the western bean cutworm in dent corn in Nebraska. 412

NECK ROT (ONIONS)
Influence of growing, curing and storage practices on development of neck rot in onions. 1027

NECROSIS
A high-temperature-induced local necrosis associated with the bean rust disease. 973

Soil inhibits infection with tobacco necrosis virus. 1050

The relationship between the hemorrhagic and lethal activities of japanese mamushi (Agkistrodon halys blomhoffii) venom. 1660

NECROTIC RING SPOT (BLUEBERRIES)
Necrotic ringspot, a new virus disease of cultivated blueberry. 1025

NECROTIC RING SPOT (CHERRIES)
Serological differentiation of prune dwarf and sour cherry necrotic ringspot viruses. 809

NECROTIC-SPOTTING (RED CLOVER)
A population of self-fertile red clover necrotic-spotting with a strain of bean yellow mosaic virus. 785

NEEDLE BLIGHT (JUNIPERUS VIRGINIANA)
Needle blight of redcedar, Juniperus virginiana l. 850

NEEDLE CAST (PINUS)
Lophodermium needle cast of the eastern white pine. 732

NEMATOCIDES
Effect of soil applications of nematocides on emergence of periodical cicada. 1407

The spectrophotofluorometric determination of O,O-diethyl O-2-pyrazinyl phosphorothioate (Zinophos) and its oxygen analog in soil and plant tissues. 1484

NEMATODA
Mechanism of swarming in Tylenchlorhynchus species (Nematoda, Tylenchida). 1295

NEMATODE EXTRACTION

NEMATODE EXTRACTION
A modification of the Buchner funnel method for transferring and concentrating nematodes. 1315

NEMATODE REPELLENTS
An assay for the detection of nematode repellents. 1285

NEMATODES
The feasibility of using a neoaplectanid nematode for control of some forest insect pests. 205

Report and abstracts of the 1959 meeting of the northeastern division of the American Phytopathological Society. 717

Citrus varieties, hybrids, species and relatives evaluated for resistance to the burrowing nematode, Radophus similis. 1292

Greenhouse pathogenicity trials with nematode-infested soil. 1296

Nematodes associated with red clover in its second growth year. 1301

Effects of soil fumigants on the occurrence of nematodes in field bins. 1305

Nematodes associated with rootlets of western white pine in northern Idaho. 1306

Physiological and biochemical studies on nematode galls. 1308

A modification of the Buchner funnel method for transferring and concentrating nematodes. 1315

A technique for making high-resolution continuous-tone photographs of nematodes. 1941

NEOAPLECTANA
The feasibility of using a neoaplectanid nematode for control of some forest insect pests. 205

NEODIPRION SERTIFER
Effects of different population levels of the European pine sawfly on young Scotch pine trees. 251

NERVES
The effect of Latrodectus mactans tredecimguttatus venom on the endogenous activity of Periplaneta americana nerve cord. 1657

NEUROENDOCRINES
Mechanical excision of the retrocerebral complex from frozen cockroach heads. 311

NEW BRUNSWICK
Pineus pineoides (Cholodkovsky) (Homoptera: Adelgidae) on red spruce in New Brunswick and Nova Scotia. 228

NEW DELHI
Meloidogyne from Taiwan and New Delhi. 1283

NEW JERSEY
The status of Tiphia vernalis Rohwer, a parasite of the Japanese Beetle, in Southern New Jersey and Southeastern Pennsylvania in 1963. 484

Wild sources of blueberry stunt virus in New Jersey. 840

NEW YORK
Survey of the Hemiptera and Homoptera infesting grasses (Gramineae) in New York. 81

Hymenopterous parasites of the alfalfa weevil, Hypera postica, in New York. 178

Seasonal densities and control of the cyclamen mite, Steneotarsonemus pallidus (Acarina: Tarsonemidae) on strawberry in New York. 204

Experimental field techniques used to evaluate gypsy moth, porthetria dispar, control in new york. 339

An entomogenous fungus observed attacking alfalfa weevil adults in New York. 340

The life history of Platynota flavedana, a leaf roller of strawberry. 675

Control of the alfalfa weevil, Hypera postica, in N.Y. 1064

Field tests for the control of certain alfalfa insect pests in New York. 1115

Dagger nematodes associated with forage crops in New York. 1318

Further airplane spray tests with carbaryl against gypsy moth in New York. 1577

NEWFOUNDLAND
The occurence and life history of the leaf tier, Cnephasia virgaureana Treit. (Lepidoptera: Tortricidae), and its parasites in Newfoundland and Prince Edward Island. 186

NIAGARA 9203
Reduction in reproductive capacity of european red mite by niagara 9203. 415

NICANDRA PHYSALODES
Nicandrenone, a new compound with insecticidal properties, isolated from Nicandra physalodes. 1779

NICANDRENONE
Nicandrenone, a new compound with insecticidal properties, isolated from Nicandra physalodes. 1779

NICOTIANA GLUTINOSA
Time of appearance and size of local lesions produced by two strains of tobacco mosaic virus. 1040

Competition between two strains of tobacco mosaic virus (TMV) on leaves of Nicotiana glutinosa. 1049

Heat-induced abnormalities - a model disease. 1724

NICOTIANA LONGIFLORA
Difference in the behavior of the Nicotiana longiflora wildfire resistance locus in tobacco varieties burley 21 and ky 61. 1005

NICOTIANA LONGIFLORA GENE
Population studies of Pseudomonas tabaci in diploid, triploid, and tetraploid Nicotiana tabacum plants with different doses of the Nicotiana longiflora gene for resistance. 997

NIGERIA
Notes on the genus Heterococcus Ferris (Coccoidea, Homoptera) with a description of a new species injurious to. 75

The mosquitos of Zaria Province, Northern Nigeria. 78

NIGHTSHADE
The pseudo-curly top disease in south Florida. 992

NITRIFICATION
A note on the effects of some soil sterilants on the mineralisation and nitrification of soil-nitrogen. 1410

NITROANILINES
Antifungal activity of substituted nitroanilines and related compounds. 1820

NITROFURAZONE
Determination of trace amounts of nitrofurazone in milk. 1529

NITROGEN
Effect of nitrogen levels on rice water weevil populations. 12

Nutritional studies on the genus Hirsutella: III. Acid-hydrolyzed casein and amino acid combinations as sources of nitrogen. 507

DDT susceptibility of Drosophila melanogaster in relation to dietary amino nitrogen. 588

Influence of nitrogen and potassium nutrition levels on the development of Fusarium systemic wilt of carnations. 811

Effect of soil fungicides upon soil-borne plant pathogenic bacteria and soil nitrogen. 906

Nitrogen supplement in the Louisiana-Mississippi river delta as a possible control for Verticillium wilt of cotton.

914

A note on the effects of some soil sterilants on the mineralisation and nitrification of soil-nitrogen. 1410

Effects of nitrogen and potasslum fertilisers on the mineral status of perennial ryegrass (Lolium perenne). I. Mineral content. 1785

Effects of nitrogen and potassium fertilisers on the mineral status of perennial ryegrass (Lolium perenne). II. Anion-cation relationship. 1786

NITROGEN COMPOUNDS
Toxin production by Helminthosporium victoriae on synthetic media containing different nitrogen sources. 1725

NOCTUIDAE
The damage control of climbing cutworms in commercial fields of lowbush blueberry. 1277

NOMENCLATURE
New approved common names of insecticides. III. . 1814

NOMIA MELANDERI
Effects of soil moisture on survival of prepupae of the alkali bee. 632

NORTH AMERICA
Three new North American poplar-infesting Chaitophorinae (Homoptera: Aphididae). 190

Asiphonaphis Wilson and Davis in North America (Homoptera: Aphididae). 198

NORTH CAROLINA
Identification and occurrence of cockroaches in dwellings and business establishments in North Carolina. 258

Distribution of Ceratocystis fagacearum in roots of wilt-infected oaks in North carolina. 749

Chemical control of periodical cicada, Magicicada septendecim, on apples in North Carolina. 1401

NORTHERN FOWL MITES
Control of northern fowl mites, Ornithonyssus sylvarium, with sulfaquinoxaline. 1343

NOSEMA APIS ZANDER

Observations on the emergence of the microsporidian sporoplasm. 1755

NOSEMA DISEASE
A survey of the incidence of nosema disease in California. 366

NOSEMA LOCUSTAE CANNING
Electron microscope study on the cytology of a microsporidian spore by means of ultrathin sectioning. 1930

NOSEMA PHRYGANIDIAE
Nosema phryganidiae n. sp., a microsporidian parasite of Phryganidia californica Packard. 494

NOVA SCOTIA
Overwintering females and the number of generations of Typhlodromus (T.) pyri Scheuten (Acarina:Phytoseiidae) in Nova Scotia. 88

Pineus pineoides (Cholodkovsky) (Homoptera: Adelgidae) on red spruce in New Brunswick and Nova Scotia. 228

NUB-ROOT (COTTON)
Seed deterioration as a factor in nub-root production in cotton. 1041

NUCLEAR MAGNETIC RESONANCE
Nuclear magnetic resonance in the examination of the thermal decomposition of O,O-dimethyl O(4-(methylthio)-3-tolyl) phosphorothioate. 1831

NUCLEIC ACIDS
Histopathological changes and histochemical studies on the nucleic acid metabolism in the polyhedrosis-infected gut of Diprion hercyniae (Hartig). 293

NURSERY STOCK (HORTICULTURE)
Lygus hesperus as an economic insect on magnolia nursery stock. 1152

NUTRITION
Ecological and nutritional studies on Coleomegilla maculata DeGeer (Coleoptera: Coccinellidae). II. The effects of different population densities and sex ratios on oviposition. 270

The additives amendment in practice. 1457

A broad view of the problem of additives in feeds and foods. 1486

NYMPHS
A critical appraisal of grasshopper forecast maps in Saskatcewan, 1936-1958. 51

Infestation of overwintering nymphs of Chortophaga viridifasciata by mermithids. 299

Immature stages and biology of Apateticus cynicus (Say) (Hemiptera: Pentatomidae). 455

The progress of nymphal development in pest grasshoppers (Acrididae) of western Canada. 571

Population counts vs. nymphs per gram of plant material in determining degree of alfalfa resistance on the potato leafhopper. 1145

o-ISOPROPOXYPHENYL-N-METHYLCARBAMATE
The colorimetric determination of o-isopropoxyphenyl-N-methylcarbamate. 1438

O-METHYL O-(2,4,5-TRICHLOROPHENYL) PHOSPHORAMIDOTHIOATES
Synthesis and insecticidal activity of O-methyl O-(2,4,5-trichlorophenyl) phosphoramidothioates and related compounds. 1815

O,O-DIETHYL O-2-PYRAZINYL PHOSPHOROTHIOATE
The spectrophotofluorometric determination of O,O-diethyl O-2-pyrazinyl phosphorothioate (Zinophos) and its oxygen analog in soil and plant tissues. 1484

OATS
Differentiation of oat Helminthosporia by the ragdoll method. 842

Hosts for differentiating oat loose-smut races of the southeastern United States. 872

Inheritance and linkage studies of a derived Victoria-type crown rust resistance and Victoria blight. 873

Victoria-type resistance to crown rust separated from susceptibility to Helminthosporium blight in oats. 874

Transmission of barley yellow dwarf virus to oats by aphids made viruliferous by needle injection. 905

Inheritance of stem rust resistance of C.I.7232, a derived tetraploid oat. 958

Sources of crown rust resistance of oats. 982

Oat varieties with adult plant field resistance to race 264 of crown rust. 1012

Altering the effect of oat rust resistant genes by certain physical means. 1729

OCTYLAMINE
Gossypol extractants: Oral toxicity to poultry of a commercial octylamine. 1571

ODONATA
A description of territorial behavior and a quantitative study of its function in males of Hetaerina americana (Fabricius) (Odonata: Agriidae). 454

ODORS
Primary odors and insect attraction. 690

Field selection of different log odors by scolytid beetles. 1083

OEBALUS PUGNAX

OEBALUS PUGNAX
Effect of infestation by the rice stink bug, Oebalus pugnax on yield and quality in rice. 1246

OESTRUS OVIS
Sheep bot fly control tests with DDVP. 1672

OHIO
Present status in control of the European red mite in Ohio with summer acaricides. 1113

Insects found in Ohio grain elevators and feed mills. 1399

OIL DEPOSITS
A field technique for oil deposit determination on citrus through colorimetric analysis. 1452

OIL INSECTICIDE COMBINATIONS
Effect of some oil insecticide combinations on coffee leaf miner. S90

OIL-BASE AERIAL SPRAYS
A rapid method of estimating the atomization of oil-base aerial sprays. 1942

OILS
Some factors influencing the ovicidal effectiveness of saturated petroleum oils and synthetic isoparaffins. 159S

Properties of petroleum oils in relation to toxicity to citrus red mite eggs. 1703

Oils and surfactants alone, and insecticide-oil combinations for aphid control on turnips and cabbage. 1714

The influence of oil content on the susceptibility of seeds to fumigation with methyl bromide. 1726

Responses of grapefruit trees to various spray oil fractions. 173S

Spread factor variation for oil-base, aerial sprays. 1845

A precision spray technique for evaluating oils for Sigatoka disease control on individual banana leaves in the field. 1890

OILSEEDS
The infestation of Canadian produce inspected in United Kingdom ports between 1953 and 1959. 1140

OKLAHOMA
Dosage-mortality data on the bollworm, Heliothis zea, and the tobacco budworm, Heliothis virescens, in Oklahoma. 493

Development of cattle grubs in Oklahoma cattle imported into Canada. 668

OKRA
Infestation of pink bollworms in okra. 70

Feeding and oviposition reaction of boll weevils to cotton, althea, and okra flower buds. 376

Hosts plants of the pink bollworm. 1235

OLEFINS
Chronic toxicity of Santomerse no.3 from Olefin (dodecyl benzene sodium sulfonate). 1669

OLEORESINS
Experiments on the interrelationship between oleoresin exudation pressure in Pinus ponderosa and attack by Ips confusus (Lec.) (Coleoptera: Scolytidae). 1276

Improved hydrostatic pressure gauge methods for measuring oleoresin exudation pressure in bark beetle research. 1871

OLFACTOMETERS
An olfactometer for use in the study of mosquito attractants. 1912

A photoelectric counter to monitor olfactory response of moths. 1975

An improved electronic counting apparatus for use in olfactometers. 1988

OLFACTORY RESPONSE
A photoelectric counter to monitor olfactory response of moths. 1975

OLFACTORY RESPONSES
Olfactory and oviposition responses of the house fly to domestic manures, with notes on an autogenous strain. 486

OLIVES
Residue determination of naphthaleneacetic acid in olives. 1537

OLPIDIUM BRASSICAE
Isolation of olpidium brassicae from roots of lettuce showing big-vein symptoms. 734

OMNIVOROUS LEAF ROLLER
Egg mortality after gamma irradiation of adults of the omnivorous leaf roller. 448

ONCOPELTUS FASCIATUS
The relation between uptake and toxicity of organophosphates for eggs of the large milkweed bug. 1718

ONIONS
The apothecial stage of botrytis squamosa, cause of tip and leaf blight of onions. 887

Systemic insecticides for the control of western flower thrips on bulb onions. 1123

Extraction of Ditylenchus dipsaci from organic soil and dried onion scales. 1302

ONTARIO
Predicting the size of European corn borer infestations (Ostrinia nubilalis Hbn.). 9

Population dynamics of Leptinotarsa decemlineata (Say) in eastern Ontario II. Population and mortality estimation during six age intervals. 80

Distribution of cyclodiene-insecticide resistance in the seed maggot complex in relation to cropping practices in southwestern Ontario. 84

Larval habitats, development, and parasites of some Tabanidae (Diptera) in southern Ontario. 10S

Insects associated with flowering Marsh Marigold, Caltha palustris L., at London, Ontario. 108

Parasitism of the dogwood flea-beetle, Altica corni, in Ontario. 130

The insect ecology of red pine plantations in central Ontario. II. Life history and control of Curculionidae. 142

Seasonal history of root-infesting Phylloxera vitifoliae (Fitch) (Homoptera: Phylloxeridae) in Ontario. 222

Laboratory studies on the feeding habits of seven species of ants (Hymenoptera: Formicidae) in Ontario. 272

The biology and behaviour of the European pine shoot moth Rhyacionia buoliana (Schiff.), in southern Ontario. II. Eggs, larva, and pupa. S67

Occurrence and food of some coccinellids (Coleoptera) in Ontario peach orchards. 1208

OOSPORE FORMATION
Oospore formation by Aphanomyces euteiches on synthetic media. 1784

OOSPORES
The role of the oospores of Peronospora parasitica in downy mildew of crucifers. 888

Germination of oospores of Aphanomyces euteiches embedded in plant debris. 970

Production of oospores by inter- and intraspecific pairings within the genus Phytophthora. 1792

ORANGES
The absorption of 1,2-dibromoethane by oranges and by materials used in their fumigation. 1085

ORCHARDS
Orchard insect surveys with blacklight traps. 164

OREGON
Field studies on flight patterns and olfactory responses of ambrosia beetles in Douglas-fir forests of western Oregon. 201

Field populations on three grain aphid species in Western Oregon. 409

Biological activities of the harvester ant, Pogonomyrmex owyheei, in central Oregon. 679

ORGANIC COMPOUNDS
Control of the hackberry-nipple gall maker with new organic insecticides. 1326

Effectiveness of seven organophosphorus compounds as space applications against Musca domestica. 1633

The halogenated aliphatic acids. 1844

Determination of mercury in mecurial and organomercurial pesticides. 1868

ORGANOPHOSPHATES
Field evaluation of organophosphate insecticides as soil treatments for the control of Hippelates gnats. 1656

Evaluation of several insecticides to control the onion maggot. 1677

The relation between uptake and toxicity of organophosphates for eggs of the large milkweed bug. 1718

The relation between basicity and selectivity in organophosophates. 1854

ORGANOPHOSPHOROUS
Acute and subacute toxicity of several organophosphorus insecticides to chicks. 1689

Persistent psychiatric symptoms from exposure to organophosphate insecticides. 1694

ORGANOPHOSPHORUS
Cholinesterase variation as a factor in organophosphate selectivity in insects. 351

A total phosphorus technique for determining organophosphorus pesticide residues using Schoeniger flask combustion. 1435

Synergism of organophosphorus systemic insecticides. 1561

Chemical structure and toxicity of some carbamoyloxy phosphorodithioates to susceptible and organophosphorus-resistant strains of mites. 1628

ORNAMENTAL PLANTS
Host plant preference of the six-spotted leafhopper. 1257

ORNITHONYSSUS BACOTI
A comparison of the number of tropical rat mites and tropical fowl mites that fed at different temperatures. 344

A comparison of the number of tropical rat mites and tropical fowl mites that fed under varying conditions of humidity. 345

ORNITHONYSSUS BURSA
A comparison of the number of tropical rat mites and tropical fowl mites that fed at different temperatures. 344

A comparison of the number of tropical rat mites and tropical fowl mites that fed under varying conditions of humidity. 345

OROBANCHE
Stimulation of broomrape seed germination. 910

ORYZA
Suitability of Oryza and other grasses as hosts of Sogata orizicola Muir. 778

ORYZA SATIVA L.
Characteristics of plant-virus inhibitors in rice, Oryza sativa. 846

OSTRINIA NUBILALIS
Predicting the size of European corn borer infestations (Ostrinia nubilalis Hbn.). 9

European corn borer in peaches. 98

Field studies of European corn borer biotypes in the Midwest. 216

Laboratory and field studies of F1 progenies from reciprocal matings of biotypes of the European corn borer. 217

The host-parasite relationship of the European corn borer, Ostrinia nubilalis, and the protozoan, Perezia pyraustae, in Delaware. 229

The re-introduction and recovery of lydella stabulans grisescens, a parasite of the european corn borer in Delaware. 230

Biological observations on the european corn borer in southeastern missouri. 449

A relationship of the plant to parasitism of european corn borer by the Tachinid parasite Lydella Grisescens. 1116

Granulated insecticides for control of some corn pests. 1129

Further field experiments on the use of Bacillus thuringiensis and chemical insecticides for the control of the european corn borer, Ostrinia nubilalis, on sweet corn in southwestern quebec. 1139

Effects of chemicals on European corn borer eggs. 1710

A microchamber for replicating photophases in diapause studies with the european corn borer. 1973

Mechanics of infrared cinematography in studies with the european corn borer. 1974

OVARIES
The effect of apholate on the ovarian development of house flies. 534

OVARIOLES
Ovarioles and developing eggs in grasshoppers. 613

OVICIDES
Some factors influencing the ovicidal effectiveness of saturated petroleum oils and synthetic isoparaffins. 1595

OVIPOSITION
Diel periodicities of emergence and oviposition in riverine Trichoptera. 37

Observations of puncturing and ovipositon behavior of boll weevils. 54

The relationship of the fruiting of the cotton plant and overwintered boll weevils to the F1 generation. 236

Ecological and nutritional studies on Coleomegilla maculata DeGeer (Coleoptera: Coccinellidae). II. The effects of different population densities and sex ratios on oviposition. 270

Studies on sod webworms. II. Oviposition behavior of crambus trisectus under regulated light conditions in the laboratory. 278

Studies on sod webworms. I. Emergence rhythm, mating, and oviposition behavior under natural conditions. 279

Oviposition and fecundity of boll weevils in mass rearing laboratory cultures. 325

Face fly oviposition studies. 357

Studies on oviposition and fecundity of Ctenicera destructor (Brown) (Coleoptera:Elateridae). 360

The utility of sealed punctures for studying fecundity and egg laying by the boll weevil. 377

Ovipositional habits of the rice water weevil California as related to a greenhouse evaluation of seed treatments. 410

OVIPOSITION RESPONSES

Some environmental factors influencing oviposition by the potato leafhopper, Empoasca fabae. 467

Mating and oviposition studies of the stable fly. 470

Oviposition and emergence period of the eye gnat Hippelates collusor. 539

Daily rhythm of oviposition in the two-spotted spider mite. 568

Uptake, transfer, and loss of P32 during metamorphosis, mating, and oviposition in Aedes vexans. S75

Eggs and oviposition sites of some predacious mirids on apple trees (Miridae: Hemiptera). S93

Factors affecting resistance of alfalfa clones to adult feeding and oviposition of the alfalfa weevil in the laboratory. 661

Development in Neodiprion excitans Rohwer as related to Oviposition and pine needle growth. 677

Oviposition preference of the cabbage maggot, Hylemya brassicae (Bouche). 698

Influence of the glandless genes on feeding, oviposition, and development of the boll weevil in the laboratory. 1183

Artificial oviposition devices for apple maggot. 19S8

OVIPOSITION RESPONSES
Olfactory and oviposition responses of the house fly to domestic manures, with notes on an autogenous strain. 486

OXALACETIC ACID
Biochemical changes associated with the development of low-temperature breakdown in apples. 1373

OXIDATION
In vivo oxidation of ronnel in the Madeiria cockroach. 446

OXYDEMETONMETHYL
Endosulfan, oxydemetonmethyl, and endrin in control of the green peach aphid and suppression of leaf roll in potatoes in eastern Washington. 1207

OXYGEN
Oxygen tolerances of four plant-parasitic nematodes. 1314

OZONE
Phytotoxicity of gas mixtures: Plant damage and eye irritation from ozone-hydrocarbon reactions. 1S83

Plant injury induced by atmospheric ozone. 1746

p-CYMENE
Two fungicidally active S-chloro-4-aryl-1,2-dithiol-3-ones derived from cumene and p-cymene. 1824

PACHYPSYLLA CELTIDISMAMMA
Control of the hackberry-nipple gall maker with new organic insecticides. 1326

PACKAGING MACHINE
An automated packaging machine for Lepidopterous larvae. 188S

PAIRINGS
Production of oospores by inter- and intraspecific pairings within the genus Phytophthora. 1792

PALESTINE SWEET LIME
Evidence that xyloporosis virus does not pass through seeds of Palestine sweet lime. 92S

PALMAE
Test of attractants for the palm weevil. 160S

PANICUM
Additional characteristics of Panicum mosaic virus. 987

PANOGEN PROCESS
Seed disinfection: Fungicide and dye distribution in liquid seed treatment. 1763

PANONYCHUS CITRI
Preliminary field evaluation of a noninclusion virus for control of the citrus red mite. 396

Hydrogenation refining vs. efficiencies of spray oils against citrus red mite eggs and California red scale. 587

Properties of petroleum oils in relation to toxicity to citrus red mite eggs. 1703

PANONYCHUS ULMI
Competition between two species of mites. I. Experimental results. 382

Reduction in reproductive capacity of european red mite by niagara 9203. 415

Suppression of European red mite by mildew fungicide programs. 109S

Present status in control of the European red mite in Ohio with summer acaricides. 1113

Sampling mites on peach leaves with the Henderson-McBurnie machine. 19S9

PANSEY SPOT
The relation of thrips to pansy spot on apples. 1174

PAPAYA MOSAIC VIRUS
Transmission of papaya mosaic virus by the green peach aphid. 909

PARA-DIMETHYLAMINOBENZENEDIAZO SODIUM SULFONATE
Colorimetric determination of Dexon residues in crops. 1424

Studies on uptake and translocation of C14-labeled p-dimethylaminobenzenediazo sodium sulfonate (Dexon) by sugar beet seedlings. 1747

PARA-OXON
The influence of parathion and para-oxon on sensory hairs of flies. 490

PARAFFINS
Some factors influencing the ovicidal effectiveness of saturated petroleum oils and synthetic isoparaffins. 1S95

PARAOXON
Inhibition of cholinesterase and ali-esterase in parathion and paraoxon poisoning in the house fly. 1SS2

PARASITES
Tetrastichus garryana Burks (Hymenoptera: Eulophidae) parasite of an oak gall-wasp, Besbicus mirabilis (Kinsey). 53

Larval habitats, development, and parasites of some Tabanidae (Diptera) in southern Ontario. 10S

A re-examination of C. F. Baker s collection of aphid parasites (Hymenoptera: Aphidiidae). 134

Introducing parasites and predators to control native pests. 177

The host-parasite relationship of the European corn borer, Ostrinia nubilalis, and the protozoan, Perezia pyraustae, in Delaware. 229

The re-introduction and recovery of Lydella stabulans grisescens, a parasite of the european corn borer in Delaware. 230

Behavior of Campoletis perdistinctus (Viereck) as a parasite of the tobacco budworm. SS2

Effects of protozoan parasites and commensals on larvae of the mosquito Aedes communis (DeGeer) (Diptera: culicidae) at Churchill, Manitoba. 669

PARASITIC INSECTS
Insect parasite and predator studies in a declining sawfly population. 10

Establishment of Aphytis holoxanthus as a parasite of Florida red scale in Florida. 31

Studies of Aleochara tristis (Coleoptera: Staphylinidae), a natural enemy of the face fly. 45

The circumstances of species replacement among parasitic Hymenoptra. 60

Biological relationships between Cardiochiles nigriceps and the Heliothis complex. 127

Parasitism of the dogwood flea-beetle, Altica corni, in Ontario. 130

Hymenopterous parasites of the alfalfa weevil, Hypera postica, in New York. 178

Patasson luna in overwintering eggs of the alfalfa weevil. 223

Trichogramma minutum as a parasite of the codling moth and red-banded leaf roller. 363

Studies with whitefly parasites of Southern California. I. Encarsia pegandiella Howard (Hymenoptera: Aphelinidae). 393

Apanteles rubecula Marsh and other parasites of Pieris rapae in British Columbia. 676

Initial field observations in California on Trioxys pallidus (Halliday), a recently introduced parasite of the walnut aphid. 1057

Effect of Trichogramma releases on parasitism of sugarcane borer eggs. 1077

Parasites of the European pine shoot moth, Rhyacionia buoliana. 1127

Resistance of experimental cotton strain 1514 to the bollworm and cotton fleahopper. 1170

The contact toxicity of some pesticide residues to hymenopterous parasites and coccinellid predators. 1429

Toxicity and acceptance of some pesticides fed to parasitic Hymenoptera and predatory coccinellids. 1548

PARASITIC NEMATODES
Nematodes associated with red clover in its second growth year. 1301

Nematodes associated with rootlets of western white pine in northern Idaho. 1306

PARASITISM
Observations on the life history of Telenomus alsophilae, an egg parasite of the elm spanworm, Ennomos subsignarius. 30

A nematode parasite of the boll weevil. 33

The alfalfa weevil parasite Bathyplectes curculionis in Illinois and notes on its dispersal. 49

The feasibility of using a neoaplectanid nematode for control of some forest insect pests. 205

Some effects of host age on parasitism by Nasonia vitripennis (Walk.) (Hymenoptera: Pteromalidae). 259

Parasites of two weevils, Microlarinus lareynii and M. lypriformis, that feed on the puncture vine, Tribulus terrestris L. 269

Differential effect of gamma radiation on fruit flies and fruit fly parasites. 277

The determination of Fall Armyworm parasitism by dissection. 318

Goniozus indicus as a parasite of the sugarcane borer. 395

The fungus Empusa aphidis Hoffman parasitic on the wooly pine needle aphid, Schizolachnus pini-radiatae (Davidson). 411

Attempted propagation of Nasonia vitripennis on the face fly. 413

Parasitism of the leaf miner Liriomyza munda in the winter garden area of Texas. 417

Parasites associated with the red-pine needle midge Thecodiplosis piniresinosae Kearby. 459

The status of Tiphia vernalis Rohwer, a parasite of the Japanese Beetle, in Southern New Jersey and Southeastern Pennsylvania in 1963. 484

Parasites of the lesser cornstalk borer. 491

Notes on two parasites attacking a Lema sp. (Coleoptera chrysomelidae). 572

Stimulation of broomrape seed germination. 910

A relationship of the plant to parasitism of european corn borer by the Tachinid parasite Lydella Grisescens. 1116

A new record of a whitefly, Aleurodes spiraeoides Quaintance, infesting cotton, with a note on its parasites. 1119

The influence of a virus disease and parasites on Spilonota ocellana in apple orchards. 1144

Parasitization of corn earworm eggs on sweet corn silk in Southern California, with notes on larval infestations and predators. 1198

Nemic parasites of coffee in Guatemala. 1282

Effect of storage temperatures on survival of plant parasitic nematodes in soil. 1291

Chemical control of plant-parasitic nematodes in plant roots. 1312

Oxygen tolerances of four plant-parasitic nematodes. 1314

A host-parasite system for testing systemic insecticides. 1574

PARATHION
Effect of repeated sprays on susceptibility of California red scale to parathion. 342

Control of a corn stem weevil (Hyperodes humilis), and fall armyworm with DDT and parathion in South Florida. 423

A comparative study of certain biological phenomena detected in a parathion-treated strain and a susceptible strain of the plum curculio, Conotrachelus nenuphar. 431

The influence of parathion and para-oxon on sensory hairs of flies. 490

Biochemical-radiological determinations of parathion resistance in Aedes micromaculis. 523

The role of carriers in the performance of granular formulations of parathion for mosquito control. 538

A comparison of chemoreceptor and whole-fly responses to DDT and parathion. 620

Inhibition of cholinesterase and ali-esterase in parathion and paraoxon poisoning in the house fly. 1552

Effectiveness of insecticides against the sorghum webworm in sorghum heads. 1613

Parathion studies on bean grown in sterile root culture. 1719

PARSNIPS
A bacterial brown rot of parsnip roots. 756

Myristicin, an insecticide and synergist occurring naturally in the edible parts of parsnips. 1164

PARTHENOGENESIS

PARTHENOGENESIS
Tests for parthenogenesis in migratory, differential, and desert grasshoppers. 285

PASTURES
Thiocyanate scorch on grassland. 1420

PATHOGENESIS
Genetics of the allelic series at the MI)A locus in barley and cultures of Erysiphe graminis f. sp. hordei that differentiate these alleles. 900

Evolution of sexuality and pathogenicity. I. Interspecific crosses in the genus Helminthosporium. 918

PATHOGENIC BACTERIA
Effect of soil fungicides upon soil-borne plant pathogenic bacteria and soil nitrogen. 906

PATHOGENICITY
Comparison of cultural variants of Alternaria sesame. 743

Variation in pathogenicity in Rhynchosporium secalis. 858

Physiologic specialization in Helminthosporium turcicum. 947

PATHOGENICTY
Host range, pathogenicity, and taxonomy of Ascochyta imperfecta. 796

PEA INSECTS
Seed treatment with phorate, disulfoton, and other insecticides to control pea insects in Iraq. 1060

PEA LEAF MINER
Phorate and demeton for control of the pea leaf miner on sugarbeets. 1383

PEACHES
European corn borer in peaches. 98

Rusty spot of peach and its control in New Jersey. 781

Peach shot hole in Arizona. 849

Observations on the natural spread of the so-called peach stunt virus in a California peach orchard. 1033

Some effects of DDT on Pulvinaria vitis (L.) (Homoptera: Coccidae) infesting peach in Ontario. 1202

Relations between Typholdromus caudiglans Schuster (Acarina: PHYTOSEIIDAE) and phytophagous mites in Ontario peach orchards. 1209

Control of the peach tree borer on young peach trees by a treatment before planting. 1239

Peach tree borer experiments in peach orchards. 1240

Observations on pustular spot on peaches. 1378

Sampling mites on peach leaves with the Henderson-McBurnie machine. 1959

PEANUTS
Some bees (Apoidea) associated with peanut flowering. 76

House fly breeding in oak sawdust and peanut hulls used as bedding in calf pens. 135

Leaf spot of peanut in georgia caused by Leptosphaerulina archidicola. 877

Recent developments in sting nematode control on peanuts. 1284

The mycoflora of peanuts in storage. 1403

Observations on the biology of the southern corn rootworm and insecticidal tests for its control on peanuts in Georgia. 1612

PEAR LEAF SCORCH
Pear leaf scorch and orchard mites. 6

PEARS
Distribution of the grape mealybug on pear. 243

Behavior of some Bartlett pear trees on their own roots. 746

Infection of pear roots with phytophthora cinnamomi. 763

Transmissible corky pit of Flemish Beauty pear. 848

Behavior and control of the grape mealybug on pear. 1173

The control of the pear leaf blister mite with endosulfan. 1215

Colorimetric determination of 6-methyl-2,3-quinoxalinedithiol cyclic carbonate (Morestan) residues in apples and pears. 1476

PEAS
Histological studies on penetration of pea roots by zoospores of Aphanomyces euteiches. 780

An unusual virus isolated from Pisum sativum affected by streak. 978

Translocation of some chlorinated hydrocarbon insecticides into the aerial parts of pea plants. 1761

PECTINOLYTIC ENZYMES
Pectinolytic and cellulolytic (Cx) enzyme production by cucurbit anthracnose fungi. 1804

PECTINOPHORA GOSSYPIELLA
Influence of moisture on winter survival of the pink bollworm. 69

Infestation of pink bollworms in okra. 70

Methods for determining pink bollworm populations in blooms. 160

Absorption and metabolism of C14-labeled DDT by DDT-susceptible and DDT-RESISTANT pink bollworm adults. 314

Pink bollworm resistance to DDT in the Laguna area of Mexico. 330

Changes in weight of abraded and unabraded larval pink bollworm under submersion and desiccation. 333

Seasonal activity of buried overwintering pink bollworm larvae in central Texas. 379

Rate of increase in resistance to DDT in pink bollworm adults. 500

Investigations of pink bollworm resistance to DDT in Mexico and the United States. 501

B-vitamin requirements of the pink bollworm. 555

Mating studies of the pink bollworm. 556

Technique for mass rearing of the pink bollworm by infesting diet medium with eggs. 584

Mass rearing pink bollworms. 585

Timing of defoliants and desiccants to reduce populations of the pink bollworm in diapause. 1059

Early-season application of DDT for pink bollworm control. 1082

Evaluation of damage to lint and seed of cotton caused by the pink bollworm. 1169

Use of cyanide in pink bollworm sex-lure traps. 1913

PECTINS
Pectic substances in forages and their relationship to bloat. 720

Role of pectic enzymes in susceptibility and resistance to Fusarium Verticillium wilts of plants. 1736

PECTOLYTIC ENZYMES
Effect of soft rot bacteria and pectolytic enzymes on electrical conductance of witloof chicory tissue. 806

PEDICULUS HUMANUS HUMANUS
Laboratory studies on resistance of the body louse to insecticides. 334

Determination of resistance by dipping lice in acetone solutions. 335

Separation and purification of DDT -degrading enzymes from the human body louse. 524

The enzymatic in vitro degradation of DDT by susceptible and DDT - resistant body lice. 560

Tests with systemic insecticides in rabbits as toxicants for body lice. 1331

PEKIN DUCKS
Mycotoxins II. The biological assay of aflatoxin in Peking white ducklings. 1543

PELARGONIUM
Resistance to the two spotted spider mite in Pelargonium. 1795

PELLICULARIA FILAMENTOSA (PAT)
Effect of culture substrate on the virulence of single-basidiospore isolates of Pellicularia filamentosa. 993

PEMPHIGUS POPULIVENAE
Sugar-beet root aphid, Pemphigus betae Doane (Homoptera: Aphididae), in southern Alberta. 419

PENETRATION
Review of herbicide penetration through plant surfaces. 1739

PENNSYLVANIA
The status of Tiphia vernalis Rohwer, a parasite of the Japanese beetle, in Southern New Jersey and Southeastern Pennsylvania in 1963. 484

PENTACHLORONITROBENZENE
Toxicity of PCNB to Magnolia fuscata. 1720

PENTATOMIDAE
Notes on and control of stink bugs affecting cotton in arizona. 670

PEPPERMINT OIL
Insecticide residues in peppermint and their distillation with peppermint oil. 1526

PEPPERS
Variability of Xanthomonas vesicatoria in the Everglades and Lower East Coast of Florida. 1011

PERA ORANGE
Stem pitting problem in a Pera sweet orange fertilization experiment. 950

Stem pitting and decline of Pera sweet oranges in the state of Sao Paulo. 960

PERCUSSION
The effects of percussion on insect pests of grain. 1066

PEREZIA PYRAUSTAE PAILLOT
Observations on the emergence of the microsporidian sporoplasm. 1755

PEREZIA PYRAUSTAE
The host-parasite relationship of the European corn borer, Ostrinia nubilalis, and the protozoan, Perezia pyraustae, in Delaware. 229

PERIPLANETA AMERICANA
Failure of myo-inositol to prevent the growth-inhibiting effects of lindane in Periplaneta americana. 383

The acute oral toxicities of some insecticides to American cockroaches. 461

Activation of guthion by tissue preparations from the American cockroach. 544

Control of the nematode Leidynema appendiculata (Leidy) (Nemata: Rhabditida Thelastomatidae) in laboratory cultures of the American cockroach. 1668

Equipment for trapping and rearing the American cockroach, Periplaneta americana. 1985

PERITHECIA
Bacteria in the perithecia of Hypoxylon pruinatum and their effect on ascospore germination and colony development. 1048

PEST CONTROL
Insecticide tests on the corn earworm as a pest of lettuce in Arizona. 420

Occurence of eye gnats (Hippelates ssp.) in the central San Joaquin Valley, California. 685

Report and abstracts of the 1959 meeting of the northeastern division of the American Phytopathological Society. 717

The cribrate weevil, a new pest of the globe artichoke in California. 863

European elm scale control investigations. 1015

Effect of delayed spraying on cankerworm control. 1316

Control of the hackberry-nipple gall maker with new organic insecticides. 1326

PESTICIDE APPLICATION
A rotary disc device for applying ultra-low-volume (undiluted) pesticides with ground equipment. 1883

PESTICIDE RESIDUES
The contact toxicity of some pesticide residues to hymenopterous parasites and coccinellid predators. 1429

A total phosphorus technique for determining organophosphorus pesticide residues using Schoeniger flask combustion. 1435

Chemical evaluation of pesticide residues on strawberries. 1458

The electron affinity detector in pesticide residue analysis. 1468

Rapid determination of diphenylamine in apples by direct bromination and gas chromatography. 1469

Colorimetric determination of 6-methyl-2,3-quinoxalinedithiol cyclic carbonate (Morestan) residues in apples and pears. 1476

The spectrophotofluorometric determination of O,O-diethyl O-2-pyrazinyl phosphorothioate (Zinophos) and its oxygen analog in soil and plant tissues. 1484

A modified analytical method for microgram amounts of metaldehyde in plant material. 1485

Identification of halogenated pesticides by mass spectroscopy. 1504

Pesticide residue analysis: Microcoulometric gas chromatography of pesticides. 1580

Simple apparatus for combustion of samples containing C14-labeled pesticides for residue analysis. 1970

PESTICIDES
Farmers expenditures for pesticides in 1964. 718

Review of adsorption and desorption of organic pesticides by soil colloids, with implications concerning pesticide bioactivity. 1404

Soil effects on pesticides:Determination of carbon in organic soils by oxygen flask combustion. 1412

Insecticide residues: Procedure for clean up of plant extracts prior to analyses for DDT and related pesticides. 1425

Pesticides and food flavor:Studies in taste panel methodology. 1488

Identification of halogenated pesticides by mass spectro-

PETIOLES

scopy. 1504

Pesticide residues:Modified and improved procedure for Schoniger total chlorine residue analysis. 1524

Toxicity and acceptance of some pesticides fed to parasitic Hymenoptera and predatory coccinellids. 1548

Toxicity of some pesticides to eggs, larvae, and adults of the green lacewing, Chrysopa carnea. 1549

Pesticide residue analysis: Microcoulometric gas chromatography of pesticides. 1580

The acute toxicity of pesticides to rats. 1602

Symposium on the mechanism of action of pesticide chemicals. 1616

Purification of pesticides:Multimolecular adsorption chromatography for purification of gram quantities of pesticides. 1855

Determination of mercury in mecurial and organomercurial pesticides. 1868

PETIOLES
Rapid screening of alfalfa for resistance to Corynebacterium insidiosum by inoculating petioles. 819

PETROBIA LATENS
Evaluation of brown wheat mite control on yield of winter wheat in Kansas. 1097

PETROLEUM
Some factors influencing the ovicidal effectiveness of saturated petroleum oils and synthetic isoparaffins. 1595

Properties of petroleum oils in relation to toxicity to citrus red mite eggs. 1703

Petroleum fractions as DDT solvents. 1866

PHASMATIDAE
Walkinsticks: an unusual pest on sour cherry. 1197

PHENOLS
Changes in the oxidation rates of polyphenols and ascorbic acid in tobacco stem tissues invaded by Pseudomonas solanacearum. 878

Insecticidal carbamates:comparison of the activities of N--methyl and N,N-dimethylcarbamates of various phenols. 1649

PHENOXY ACID
Herbicide determination:A new basic procedure for determining phenoxy acid herbicides in agricultural products. 1496

PHENYL DIMETHYL PHOSPHATES
Factors influencing the systemic insecticidal action of substituted phenyl dimethyl phosphates. 1850

PHENYL N-METHYLCARBAMATES
The synergism of substituted phenyl N-methylcarbamates by piperonyl butoxide. 1600

PHENYLPHENOL
Fungicide residues:A modified Gibbs method for the determination of 1 p.p.m. or less of o-phenylphenol in fruits. 1491

PHERMONES
Sex pheromones of noctuid moths. I. A quantitative bioassay for the sex pheromone of trichoplusia ni (Lepidoptera: noctuidae). 605

PHEROMONE
Insect pheromone collection with absorption columns. I. Studies on model organic compounds. 607

PHLORIZIN
Metabolism in vitro of phloridzin and other host compounds by Venturia inaequalis. 1748

PHOLIOTA ADIPOSA
Several species of Pholiota associated with root and butt rots of Rocky Mountain conifers. 782

PHOLIOTA ALNICOLA
Several species of Pholiota associated with root and butt rots of Rocky Mountain conifers. 782

PHOLIOTA SQUARROSA
Several species of Pholiota associated with root and butt rots of Rocky Mountain conifers. 782

PHONY DISEASE (PEACHES)
Experimental control of phony peach virus vectors with Di-syston. 847

PHORATE
Apparent increase in populations of the strawberry aphid caused by phorate and disulfoton. 603

Seed treatment with phorate, disulfoton, and other insecticides to control pea insects in Iraq. 1060

Granular phorate and Di-Syston for control of aphids on field-grown Easter lily. 1100

Germination of alfafa seed treated with dry and liquid formulations of di-syston and phorate. 1222

Phorate and demeton for control of the pea leaf miner on sugarbeets. 1383

Insecticide residues:Determination of residues of phorate and its insecticidally active metabolities by cholinesterase inhibition Part I. Basic method Part II. Alternative sample preparation and recovery data. 1450

Insecticide residues: Colorimetric determination of residues of phorate and its insecticidally active metabolites. 1464

Phorate residues in tomato fruit and foliage. 1532

Improved colorimetric determination of phorate residues in plant tissues. 1534

The effect of various adjuvants on the systemic insecticidal activity of phorate and Zectran. 1642

PHORMIA REGINA
The effect of temperature fecundity and longevity of the black blow fly, Phormia regina. 558

Hydroxylation as a factor in resistance in house flies and blow flies. 597

PHOSPHAMIDON
Carbaryl, phosphamidon, and DDT tests on the western hemlock looper in Washington. 313

Seed treatment with phorate, disulfoton, and other insecticides to control pea insects in Iraq. 1060

Method for phosphamidon residue analysis. 1426

Effect of environmental factors on phosphamidon degradation. 1500

PHOSPHINE
Studies of phosphine as a fumigant for sacked rice under gas-tight tarpaulins. 1381

Determination of phosphine in air by gas chromatography. 1408

PHOSPHORODITHIOATE COMPOUNDS
Effects of certain phosphorodithioate compounds upon populations of Pratylenchus penetrans. 1298

PHOSPHORUS COMPOUNDS
Effectiveness of seven organophosphorus compounds as space applications against Musca domestica. 1633

PHOTOELECTRIC COUNTER
A photoelectric counter to monitor olfactory response of moths. 1975

PHOTOGRAPHY
Photography in mite counting. 1872

A photographic technique for recording distribution and loss of insecticides on cattle. 1876

A technique for making high-resolution continuous-tone

photographs of nematodes. 1941

PHOTOMETRY
Application of direct photometry to agricultural analysis. 1967

PHOTOPERIODISM
A modified photoperiod control device. 1894

PHOTOPHASES
A microchamber for replicating photophases in diapause studies with the european corn borer. 1973

PHOTOSYNTHESIS
Elm spanworm head capsule widths and instars. 46

PHYLLOCOPTRUTA OLEIVORA
Laboratory methods for rearing rust mites (Phyllocoptruta oleivora and Aculus pelekassi) on citrus. 581

PHYLLOTRETA STRIOLATA
Resistance of 30 commercial cruciferous varieties to the striped flea beetle, Phyllotreta striolata. 1075

PHYLLOXERA VITIFOLIAE
The vapor toxicity of certain bromopropanes to the grape phylloxera under controlled laboratory conditions. 1673

PHYSALOSPORA OBTUSA (CKE.) WINTER
Physalospora obtusa (Cke.) Winter on South Carolina live oaks. 994

PHYSICAL BARRIERS
Physical barriers in relation to Fusarium wilt resistance in bananas. 739

PHYTOPATHOLOGY
Bibliography of reviews, 1949-1959. 716

PHYTOPHTHORA
Studies on the Phytophthora rot of sugarcane seed pieces in Louisiana. 723

Phytophthora root and stem rot of lupines. B45

Production of oospores by inter- and intraspecific pairings within the genus Phytophthora. 1792

PHYTOPHTHORA CAPSICI
Resistance to Phytophthora root rot in pepper. B56

PHYTOPHTHORA CINNAMOMI
Infection of pear roots with phytophthora cinnamomi. 763

Chemotaxis of zoospores for root exudates in relation to infection by Phytophthora cinnamomi. 1055

PHYTOPHTHORA CRYPTOGEA
Some factors affecting sporangium formation of Phytophthora cryptogea. 1753

PHYTOPHTHORA DRECHSLERI
Development of safflower varieties resistant to Phytophthora root rot. 1013

PHYTOPHTHORA GUMMOSIS
Effect of stem girdling of citrus seedlings on size of Phytophthora gummosis lesions. 7BB

PHYTOPHTHORA INFESTANS
Nature of partial resistance of three species of potatoes to Phytophthora infestans. 824

PHYTOPHTHORA PARASITICA
A root disease of fuchsia caused by Phytophthora parasitica. 931

PHYTOPHTHORA SOJAE
Frozen-lima-bean agar for culture and storage of Phytophthora sojae. 762

PHYTOPHTHORA SPP.
Vegetative growth of Phytophthora spp. on differential synthetic media as an aid in separating isolates pathogenic to citrus. 7B9

The production and use of zoospore suspensions of phytophthora spp. for investigations of diseases of citrus. B60

PHYTOSEIID MITES
The use of agar media in transporting and rearing phytoseiid mites. 520

PHYTOTOXICITY
Relation of structure to phytotoxicity of s-triazine herbicides on cotton and weeds. 719

PICEA
The biology of Pineus similis (Gill.) (Homoptera: Phylloxeridae) on spruce. 39

PICEA GLAUCA
White spruce seed loss caused by insects in interior Alaska. 1264

PICEA RUBENS
Pineus pineoides (Cholodkovsky) (Homoptera: Adelgidae) on red spruce in New Brunswick and Nova Scotia. 22B

PIERIS RAPAE
Sequential sampling for the imported cabbageworm, Pieris rapae (L.). 79

PIGMENTS
Cotton-plant pigment as a source of resistance to the bollworm and tobacco budworm. 1640

PIMARICINE
The selective effect of the antibiotic Pimaricine upon growth of several cacao fungi in vitro. 82B

PINE BARK
Use of radiography to detect mortality of California flatheaded borers in pine bark. 1986

PINE LOGS
Tests with endosulfan to prevent borer damage to unseasoned pine logs. 1380

PINEAPPLES
Herbicide residues: Colorimetric microdetermination of 1-chloro-2-nitrobenzene in pineapple. 1536

PINUS
Some biological attributes of sawflies in the Neodiprion fulviceps complex in a brushfield pine plantation (Hymenoptera: Diprionidae). 41

The pine root-cellar weevil, Hylobius radicis Buch., in southern Ontario. 58

The life history and ecology of the woolly pine needle aphid Schizolachnus pini-radiatae (Davidson) (Homoptera: Aphidae). 74

Studies on the biology of the irregular pine scale. 109

The biology and ecology of the red-pine needle midge and its role in fall browning of red pine foliage. 110

The insect ecology of red pine plantations in central Ontario. II. Life history and control of Curculionidae. 142

The susceptibility of twenty-three tree species to black root rot. 955

A field test of lindane for prevention and control of attack by Ips confusus (LeConte) (Coleoptera:Scolytide) in slash. 1242

Toxicity of pine resin vapors to three species of Dendroctonus bark beetles. 1695

PINUS BANKSIANA
Deterioration of immature jack and red pine plantations in Wisconsin. 861

PINUS ELLIOTTI ENGELM
Preferential attack by Dendroctonus terebrans on Pinus elliottii. 215

PINUS LAMBERTIANA
Thermal death range of sclerotia of Macrophomina phaseoli. 741

PINUS MONTICOLA
Nematodes associated with rootlets of western white pine in northern Idaho. 1306

PINUS PONDEROSA

PINUS PONDEROSA
A comparison of radiograph analysis and bark dissection in estimating numbers of western pine beetle. 43

Experiments on the interrelationship between oleoresin exudation pressure in Pinus ponderosa and attack by Ips confusus (Lec.) (Coleoptera: Scolytidae). 1276

PINUS RESINOSA
In vitro establiishment and development of Eucosma sp. larvae from cones of Pinus resinosa on an artificial nutrient medium. 286

Deterioration of immature jack and red pine plantations in Wisconsin. 861

PINUS STROBUS
Lophodermium needle cast of the eastern white pine. 732

Blister rust fungus inoculations on white pines in mist chambers. 1024

PINUS SYLVESTRIS
Effects of different population levels of the European pine sawfly on young Scotch pine trees. 251

PIPERAZINE
Feed additives analysis: Microanalysis of piperazine. 1811

PIPERONYL BUTOXIDE
The migration of piperonyl butoxide from treated multiwall kraft bags into four commodities. 1477

The stabilising effect of piperonyl butoxide on pyrethrins exposed to ultra-violet light. 1590

The synergism of substituted phenyl N-methylcarbamates by piperonyl butoxide. 1600

PISUM SATIVUM
Temperature effecting a reversal of dominance in the resistance of Pisum sativum to bean virus 2. 977

An unusual virus isolated from Pisum sativum affected by streak. 978

PLANT ANALYSIS
Plant tissue analysis: X-ray fluorescence determination of zinc in plant tissues. 1801

PLANT ATTRACTANTS
A laboratory technique for bioassay of plant attractants for the boll weevil. 1916

PLANT BIOCHEMISTRY
Biochemical studies of the clover root tumors induced by wound-tumor virus. 937

Culturing, histopathology, and biochemistry of Ditylenchus dipsaci and Aphelenchoides ritzema-bosi on alfalfa tissues. 1300

Physiological and biochemical studies on nematode galls. 1308

PLANT BUDDING
Effects of disbudding on the shoot mortality, growth, and bud production in red and sugar maples. 1155

Detection of compounds that inhibit vegetative bud growth of tobacco. 1768

PLANT CHEMOTHERAPY
Chemotherapy of cereal rusts with a new antibiotic. 783

PLANT CONTAMINATION
Determination of fallout cesium-137 in animal and plant tissues. 1553

Depth of feeding as it affects the concentration of radioactivity within the plant. 1732

Uptake of radioactive fission products by crop plants. 1781

Availability of exchangeable and non-exchangeable strontium-90 to plants. 1790

PLANT CURING
Influence of growing, curing and storage practices on development of neck rot in onions. 1027

PLANT DECAY
Germination of oospores of Aphanomyces euteiches embedded in plant debris. 970

Decay of freshly harvested potatoes in air-tight containers. 1374

PLANT DISEASE CONTROL
Report and abstracts of the 1959 meeting of the northeastern division of the American Phytopathological Society. 717

Control of internal cork of sweet potato by isolation. 880

Tests with systemic insecticides for control of insects and certain diseases on potatoes. 1125

PLANT DISEASE RESISTANCE
Lesion type as a means of evaluating barley lines for resistance to Helminthosporium sativum. 776

Rapid screening of alfalfa for resistance to Corynebacterium insidiosum by inoculating petioles. 819

On the resistance of tomato varieties to Cladosporium fulvium. 821

Nature of partial resistance of three species of potatoes to Phytophthora infestans. 824

Resistance to Phytophthora root rot in pepper. 856

Adaptation of the corn leaf blight fungus to a resistant and a susceptible corn host. 946

Resistance induced in one plant part as a result of virus infection in another part. 953

A survey of the world barley collection for resistance to barley yellow dwarf. 969

Temperature effecting a reversal of dominance in the resistance of Pisum sativum to bean virus 2. 977

Use of benzimidazole and excised wheat seedling leaves in testing resistance to Septoria tritici. 981

Sources of crown rust resistance of oats. 982

Population studies of Pseudomonas tabaci in diploid, triploid, and tetraploid Nicotiana tabacum plants with different doses of the Nicotiana longiflora gene for resistance. 997

Oat varieties with adult plant field resistance to race 264 of crown rust. 1012

Maize synthetics for disease resistance. 1038

Evaluation of cotton strains and progenies for resistance to Verticillium wilt. 1042

Resistance to bacterial wilt in eggplant in North Carolina. 1047

A new race of bean rust in Maryland. 1054

PLANT DISEASE TRANSMISSION
Seasonal flights of insect vectors of several plant viruses in southern Arizona. 38

The question of seed transmission of cachexia-xyloporosis virus. 772

Differential transmission of four strains of strawberry vein banding virus by four aphid vectors. 805

Transmissible corky pit of Flemish Beauty pear. 848

Transmission of a disease of Helminthosporium victoriae. 865

Transmission of lettuce mosaic virus by a new vector, Pemphigus bursarius. 886

Hoja blanca transmission studies on rice. 889

Transmission of barley yellow dwarf virus to oats by aphids made viruliferous by needle injection. 905

Transmission of psorosis virus by dodder. 938

Seed transmission of exocortis virus. 966

PLANT DISEASES
Entomophthoraceous fungi attacking the potato aphid in northeastern Maine in 1960. 983

Culturing, histopathology, and biochemistry of Ditylenchus dipsaci and Aphelenchoides ritzema-bosi on alfalfa tissues. 1300

Phytotoxicity of gas mixtures: Plant damage and eye irritation from ozone-hydrocarbon reactions. 1583

PLANT ECOLOGY
Some concepts on the ecological basis of biological control of weeds. 1320

Saprophytic activity and survival of Rhizoctonia in soil as affected by some ecological factors. 1783

PLANT EMBRYOS
A quick method of preparing barley embryos for loose smut examination. 898

PLANT ENZYMES
Role of pectic enzymes in susceptibility and resistance to Fusarium Verticillium wilts of plants. 1736

PLANT EXTRACTS
Cotton extracts as arrestants and feeding stimulants for the boll weevil. 460

Extraction of a boll weevil attractant from the surrounding growing cotton. 462

Response of five species of insects to water extracts of their host plants. 464

Methods of evaluating the chemotropic response of boll weevils to extracts of the cotton plant and various other substances. 546

A boll weevil repellent from the volatile substance of cotton. 1182

Insecticide residues: Procedure for clean up of plant extracts prior to analyses for DDT and related pesticides. 1425

A modified analytical method for microgram amounts of metaldehyde in plant material. 1485

The antigenic analysis of extracts from healthy plants. 1777

PLANT FOODS
The effects of different plant foods on the fecundity, fertility, and development of a cotton stainer, Dysdercus superstitiosus (F.). 390

PLANT GALLS
Insects and spiders from goldenrod galls of Gnorimoschema gallaesolidaginis Riley (Gelechiidae). 106

Biochemical studies of the clover root tumors induced by wound-tumor virus. 937

Physiological and biochemical studies on nematode galls. 1308

PLANT GENETICS
Asexual variants of Melampsora lini. 801

Genetics of the allelic series at the MI)A locus in barley and cultures of Erysiphe graminis f. sp. hordei that differentiate these alleles. 900

Inheritance of stem rust resistance of C.I.7232, a derived tetraploid oat. 958

Difference in the behavior of the Nicotiana longiflora wildfire resistance locus in tobacco varieties burley 21 and ky 61. 1005

Noninfectious crinkle leaf on santa rosa plum. 1204

PLANT GRAFTING
Carbohydrate reserves in grafted plants of potato varieties resistant to virus X. 742

PLANT GROWTH INHIBITORS
Effects of disbudding on the shoot mortality, growth, and bud production in red and sugar maples. 1155

The relationship between sprout inhibitors and overwintering of aphids on outdoor piles of cull potatoes. 1233

Detection of compounds that inhibit vegetative bud growth of tobacco. 1768

Growth retardants and plant vigor:Increasing tolerance of soybean plants to some soluble salts through application of plant growth-retardant chemicals. 1769

PLANT GROWTH REGULATOR
Residue determination of naphthaleneacetic acid in olives. 1537

PLANT HARDINESS
Native insects as pollinators of caged alfalfa clones and seedling performance of the progeny. 487

Population counts vs. nymphs per gram of plant material in determining degree of alfalfa resistance on the potato leafhopper. 1145

Resistance of experimental cotton strain 1514 to the bollworm and cotton fleahopper. 1170

Northern corn rootworm resistance in sweet corn. 1259

Growth retardants and plant vigor:Increasing tolerance of soybean plants to some soluble salts through application of plant growth-retardant chemicals. 1769

Health status of sisal plants (Agave sisiana) as related to soils and the mineral composition of their leaves. 1778

PLANT HISTOLOGY
Histological studies on penetration of pea roots by zoospores of Aphanomyces eutelches. 780

Pathological histology of Tabasco pepper plants infected with tobacco etch virus. 1039

PLANT HORMONES
Auxin content of extracts of certain tolerant and susceptible host plants of Toxoptera graminum, Macrosiphum pisi, and Therioaphis maculata and relation to host plant resistance. 1181

PLANT HOSTS
Downy chess grass as a host of the pear psylla. 247

Site of spruce budworm egg masses on their preferred hosts in the Lake States. 252

Effect of host plant condition and fertilization on two-spotted spider mite fecundity. 435

Response of five species of insects to water extracts of their host plants. 464

Biology of the mountain pine beetle, Dendroctonus monticolae Hopkins, in the East Kootenay region of British Columbia II. Behaviour in the host, fecundity, and internal changes in the female. 583

Investigations of the possibility of host specific strains of the bollworm and tobacco budworm in mississippi. 619

Pathogenicity and morphology of some leguminicolous and related species of Stemphylium. 818

Adaptation of the corn leaf blight fungus to a resistant and a susceptible corn host. 946

The role of alternate plant hosts in the aphid transmission of bean mosaics in central Washington. 948

Chemical factors influencing host selection by the Mexican bean beetle Epilachna varivestis Muls. 1159

PLANT INJURIES

Additional noncotton hosts of the boll weevil and cotton leafworm. 1171

Two varieties of Sesbania grandiflora as fruit fly hosts. 1193

PLANT INJURIES
Life history, habits, and damage of the boxelder leaf gall midge, Contarinia negundifolia Felt (Diptera: Cecidomyiidae) in Michigan. 680

Relationship between injury by the clover root curculio and incidence of Fusarium root rot in Ladino white clover. 820

Types of injuries on cantaloupe leaves associated with guttation. 841

Effects of spider mite infestations on dent corn in California. 1065

Plant injury induced by atmospheric ozone. 1746

PLANT INSECT CONTROL
Tests with systemic insecticides for control of insects and certain diseases on potatoes. 1125

PLANT INSECT RESISTANCE
Auxin content of extracts of certain tolerant and susceptible host plants of Toxoptera graminum, Macrosiphum pisi, and Therioaphis maculata and relation to host plant resistance. 1181

PLANT METABOLISM
Some metabolic changes in wheat due to stem rust infection and different temperatures. 812

Metabolism of dimethoate in cotton leaves. 1742

Tolerance of several grass species to 2-Chloro-s-triazine herbicides in relation to degradation and content of benzoxazinone derivatives. 1744

Metabolism of alpha-chloro-N,N-diallylacetamide(CDAA) and 2-chloroallyl-N,N-diethyldithiocarbamate(CDEC) by plants. 1750

Degradation of 4-(2,4-dichlorophenoxy)-butyric acid (4-(2,4-DB)) in plants. 1766

Metabolism of triazine herbicides by plants. 1776

Similar metabolic alterations induced in sweet potato by poisonous chemicals and by Ceratostomella fimbriata. 1800

Identification of metabolites of Zectran insecticide in broccoli. 1803

Nuclear magnetic resonance in the examination of the thermal decomposition of O,O-dimethyl O(4-(methylthio)-3-tolyl) phosphorothioate. 1831

PLANT MORPHOLOGY
Morphology and host range of a subterranean member of the Meliolaceae. 816

PLANT NEMATODE RESISTANCE
Citrus varieties, hybrids, species and relatives evaluated for resistance to the burrowing nematode, Radopholus similis. 1292

PLANT NEMATODES
Growth studies of a Catenaria sp. infecting nematodes. 1279

Nemic parasites of coffee in Guatemala. 1282

Population variation of Pratylenchus penetrans and other nematodes associated with roots. 1286

Recovery of nematodes from infected roots by enzyme preparations. 1288

Effect of storage temperatures on survival of plant parasitic nematodes in soil. 1291

Effects of soil fumigants on the occurrence of nematodes in field bins. 1305

Preliminary studies with DBCP cotton seed treatment for controlling the root-knot nematode. 1307

Reaction of sixteen varieties of alfalfa to two species of root-knot nematodes. 1309

Chemical control of plant-parasitic nematodes in plant roots. 1312

Oxygen tolerances of four plant-parasitic nematodes. 1314

Nematode control on roses with root dip treatments. 1319

PLANT NUTRITION
The effect of plant nutriton on the fecundity of two strains of two-spotted spider mite. 701

Influence of nitrogen and potassium nutrition levels on the development of Fusarium systemic wilt of carnations. 811

Bacterial spot of tomato as influenced by temperature and by age and nutrition of the host. 912

Studies on the penetration and nutrition of Striga asiatica. 951

Influence of boron nutrition of Nicotiana tabacum on the multiplication of tobacco mosaic virus. 984

The effect of nutrition on germination of conidia of Helminthosporium sativum in natural soil. 1727

Depth of feeding as it affects the concentration of radioactivity within the plant. 1732

Sulphur nutrition of Aphanomyces euteiches. 1743

The effect of mineral nutrition on spore germination and growth responses in Aspergillus niger and some other fungi. 1771

PLANT PEST CONTROL
Mexico-United States cooperative plant pest control programs. 1090

Chemical control of slugs affecting vegetables and strawberries in thePacific Northwest. 1297

PLANT PEST RESISTANCE
Contents of corn silks in relation to corn earworm injury. 1105

Resistance of spring wheats to the wheat stem sawfly, Cephus cinctus Nort. (Hymenoptera: Cephidae II. resistance to the larva. 1136

Chemical factors influencing host selection by the Mexican bean beetle Epilachna varivestis Muls. 1159

Amino acid content of corn silks in relation to resistance to corn earworm. 1186

Studies of resistance of cotton strains to the boll weevil. 1189

Factors affecting resistance of selected alfalfa clones to the potato leafhopper. 1194

The sawfly Atomacera decepta, a pest of Hibiscus. 1250

Variation in susceptibility of soybean pubescent types, broad bean, and runner bean varieties and plant introductions to the potato leafhopper. 1271

PLANT PHYSIOLOGY
Native insects as pollinators of caged alfalfa clones and seedling performance of the progeny. 487

Physiology of bacterial spot of tomato. 913

Influence of growing, curing and storage practices on development of neck rot in onions. 1027

Growth and yield of grain sorghum infested in the whorl with fall armyworm. 1132

Effects of disbudding on the shoot mortality, growth, and bud production in red and sugar maples. 1155

Growth studies of a Catenaria sp. infecting nematodes.

1279

Physiological and biochemical studies on nematode galls. 1308

The growing and manuring of tea. 1731

Responses of grapefruit trees to various spray oil fractions. 1735

The influence of two systemic organophosphates on growth, fruiting, and yield of cotton in California. 1758

Growing seedlings free of air-borne microflora. 1938

PLANT PROPAGATION
Native insects as pollinators of caged alfalfa clones and seedling performance of the progeny. 487

PLANT PROTECTION
Cross-protection studies with strains of concave gum and psorosis viruses. 952

PLANT REGULATORS
Persistence and translocation of exogenous regulating compounds that exude from roots. 1762

PLANT RESIDUES
Effect of growing crops and crop residues on soil fungi and seedling blights. 1045

Colorimetric determination of Dexon residues in crops. I424

PLANT RESPIRATION
Elm spanworm head capsule widths and instars. 46

Variations in respiratory responses in Fusarium-infected tomato plants. 971

PLANT SENESCENCE
Bacterial spot of tomato as influenced by temperature and by age and nutrition of the host. 912

PLANT STORAGE
Influence of growing, curing and storage practices on development of neck rot in onions. I027

PLANT SYNTHETICS
Maize synthetics for disease resistance. 1038

PLANT TEMPERATURE
Bacterial spot of tomato as influenced by temperature and by age and nutrition of the host. 912

The influence of temperature on development of Phytophthora parasitica root rot of Fuchsia. 932

Some effects of temperature on the transmission of pea enation mosaic virus and on the biology of the pea aphid vector. 1009

Stability of resistance to pea aphid and spotted alfalfa aphid in several alfalfa clones under various temperature regimes. 1142

PLANT TISSUE
Improved colorimetric determination of phorate residues in plant tissues. 1534

PLANT TRANSLOCATION
Effect of light and humidity on the absorption and translocation of dimethoate in the cotton plant. 1165

Effect of charge of ionized chemotherapeutants on their translocation through xylem. 1738

Studies on uptake and translocation of C14-labeled p-dimethylaminobenzenediazo sodium sulfonate (Dexon) by sugar beet seedlings. I747

Translocation of some chlorinated hydrocarbon insecticides into the aerial parts of pea plants. 1761

Persistence and translocation of exogenous regulating compounds that exude from roots. 1762

Studies of endosulfan in bean plants by paper and gas chromatography. 1796

PLANT VIRUS INFECTION
Soil inhibits infection with tobacco necrosis virus. 1050

PLANTATIONS
Strains of Pseudomonas solanacearum in indigenous hosts in banana plantations of costa rica, and their relationship to bacterial wilt of bananas. 754

Deterioration of immature jack and red pine plantations in Wisconsin. 861

PLATANUS
The early leaf and twig blight stage of sycamore anthracnose. 915

PLATYPODIDAE
Field studies on attack flight and log selection by the ambrosia beetle Trypodendron lineatum (Oliv.) (Coleoptera: Scolytidae). 331

PLODIA INTERPUNCTELLA
Gross effects of gamma radiation on the Indian-meal moth and the angoumois grain moth. 338

PLOWING
Plowing for sweetclover weevil control. 1175

PLOWS
A two-bottom two-way plow sole fumigator. 1898

PLUMS
Noninfectious crinkle leaf on santa rosa plum. 1204

POA
Silver top of bluegrass. 1003

Control of plant bugs and other insects on Kentucky bluegrass grown for seed. 1244

POA PRATENSIS
Broad spectrum fungicides tested for control of melting-out of Kentucky bluegrass and Sclerotinia dollar spot of Seaside bentgrass. 779

POLLINATION
Native insects as pollinators of caged alfalfa clones and seedling performance of the progeny. 487

A cage to contain small insects during pollination studies. 589

POLYBUTENES
Laboratory trials of six polybutene emulsions against the two-spotted spider mite. 1617

POLYHEDROSES
Histopathological changes and histochemical studies on the nucleic acid metabolism in the polyhedrosis-infected gut of Diprion hercyniae (Hartig). 293

Serological relationships between insect viruses and their inclusion-body proteins. 481

Dosages of nuclear-polyhedrosis virus effective against Malacosoma disstria with notes on interspecies susceptibility. 483

The effect of storage on the virulence of a polyhedrosis virus. 547

Dissemination of nuclear polyhedrosis virus against the forest tent caterpillar, Malacosoma disstria (Hubner) (Lepidoptera : Lasiocampidae). 624

Notes on polyhedroses in Peridroma, Prodenia, Colias, Heliothis, and other Lepidoptera. 628

A cytoplasmic polyhedrosis of the armyworm, Pseudaletia unipuncta (Haworth) (Lepidoptera, Noctuidae). 643

Further studies of the cytoplasmic polyhedrosis virus of the alfalfa caterpillar. 683

Integration of the Heliothis nuclear polyhedrosis virus into a biological control program on cotton. 1061

POLYMERIZATION
Polymerization as a means of prolonging effectiveness of orally administered systematic insecticides. 521

POLYPLOIDY

POLYPLOIDY
Population studies of Pseudomonas tabaci in diploid, triploid, and tetraploid Nicotiana tabacum plants with different doses of the Nicotiana longiflora gene for resistance. 997

POLYSACCHARIDES
The occurrence of a variety of enzymes hydrolyzing cell wall polysaccharides in apples rotted by Botryosphaeria ribis. 883

POLYTETRAFLUOROETHYLENE
The use of Fluon to prevent the escape of stored-product insects from glass containers. 1960

PONCIRUS TRIFOLIATA
The effect of host nutrition on the development of exocortis in Poncirus trifoliata. 1035

PONDS
Local distribution of released laboratory-reared screw-worm flies in relation to water sources. 90

POPILLIA JAPONICA
The status of Tiphia vernalis Rohwer, a parasite of the Japanese Beetle, in Southern New Jersey and South-eastern Pennsylvania in 1963. 484

Egg viability and longevity of japanese beetles treated with tepa, apholate, and metepa. 485

Attractants for japanese beetles tested in the field. 598

Japanese beetle damage to soybeans and corn. 1121

POPULATION
Mass marking boll weevil field populations. 42

A population of self-fertile red clover necrotic-spotting with a strain of bean yellow mosaic virus. 785

Population studies of Pseudomonas tabaci in diploid, triploid, and tetraploid Nicotiana tabacum plants with different doses of the Nicotiana longiflora gene for resistance. 997

Population development of Meloidogyne arenaria in red clover. 1281

The reactions of three golden nematode populations to resistant and susceptible potato selections. 1294

Effects of certain phosphorodithioate compounds upon populations of Pratylenchus penetrans. 1298

Area population control of heel flies by Rueiene pour-on application annually to cattle. 1355

POPULATION (INSECTS)
Seasonal densities and control of the cyclamen mite, Steneotarsonemus pallidus (Acarina: Tarsonemidae) on strawberry in New York. 204

POPULATION INCREASE
Apparent increase in populations of the strawberry aphid caused by phorate and disulfoton. 603

POPULATION MIGRATION (INSECTS)
An unusual record of the southern fire ant, Solenopsis xyloni, in North Carolina. 257

POPULATION STATISTICS
Population variation of Pratylenchus penetrans and other nematodes associated with roots. 1286

POPULATION STATISTICS (INSECTS)
The importance of timing in adult grasshopper surveys. 50

Infestation patterns of Douglas-fir beetle in standing and windthrown trees in southern Idaho. 63

Sequential sampling for the lodgepole needle miner, Evagora milleri. 221

An unusual record of the southern fire ant, Solenopsis xyloni, in North Carolina. 257

POPULUS
Three new North American poplar-infesting Chaitophorinae (Homoptera: Aphididae). 190

Outbreaks of the forest tent caterpillar, Malacosoma disstria Hbn., a periodic defoliator of broad-leaved trees in Ontario. 214

POPULUS TREMULOIDES MICHX.
A new subgenus and species of Fullawaya Essig (Homoptera, Aphididae) from Populus tremuloides Michx. 137

PORTHETRIA DISPAR
Experimental field techniques used to evaluate gypsy moth, porthetria dispar, control in new york. 339

Insecticide tests against gypsy moth larvae. 463

A technique for rearing the gypsy moth, Porthetria dispar (L.), on an artificial diet. 554

Laboratory evaluation of certain chemosterilants against the gypsy moth. 1576

Further airplane spray tests with carbaryl against gypsy moth in New York. 1577

PORTUGUESEWESTAFRICA
Biological control of the coconut scale, Aspidiotus destructor Sign., in Principe, Portugese West Africa. 1236

POTASSIUM
Influence of nitrogen and potassium nutrition levels on the development of Fusarium systemic wilt of carnations. 811

Effects of nitrogen and potassium fertilisers on the mineral status of perennial ryegrass (Lolium perenne). I. Mineral content. 1785

Effects of nitrogen and potassium fertilisers on the mineral status of perennial ryegrass (Lolium perenne). II. Anion-cation relationship. 1786

POTASSIUM ARSENITE
A carcinogenicity evaluation of potassium arsenite and arsanilic acid. 1436

POTASSIUM SALTS
Use of gibberellic acid in facilitating the mechanical harvesting of dwarf beans. 1734

POTATO LEAFROLL VIRUS
Green peach aphid distribution and potato leafroll virus occurrence in the seed-potato producing areas of Idaho. 744

POTATO SEEDS
The amount of Verticillium albo-atrum in Idaho certified potato seed. 823

POTATO-TUBER
A tobacco-necrosis-like virus isolated from potato-tuber lesions and California soils. 815

POTATOES
A method of rearing southern potato wireworm. 40

A comparison of two sampling methods for estimating population trends of thrips and mites on potatoes. 179

Carbohydrate reserves in grafted plants of potato varieties resistant to virus X. 742

Nature of partial resistance of three species of potatoes to Phytophthora infestans. 824

Scopolin production in potato tubers infected with Phytophthora infestans. 839

Changes in potato proteins induced by fungus infections. 1000

Relation of age of potato plants to infection by Verticillium albo-atrum. 1016

Pseudomonas solanacearum in Israel. 1029

Control of the southern potato wireworm, Canoderus falli, on early-crop potatoes. 1094

Tests with systemic insecticides for control of insects and certain diseases on potatoes. 1125

The relationship between sprout inhibitors and overwintering of aphids on outdoor piles of culi potatoes. 1233

The reactions of three golden nematode populations to resistant and susceptible potato selections. 1294

Decay of freshly harvested potatoes in air-tight containers. 1374

Herbicide residues: Improved extraction procedure for the determination of EPTC residues in potatoes. 1467

Herbicide residues: Determinations of small amounts of arsenic in potatoes. Extraction and reduction of molybdoarsenic acid. 1493

Growth, reproduction, mortality, and pathologic changes in rats fed gamma irradiated potatoes. 1562

Rumen degradation of fungicides:Fate of tetramethylthiuram disulfide in the digestive tract of the ruminant animal. 1789

Food antioxidants:Determination of butylated hydroxyanisole and butylated hydroxytoluene in potato granules by gas-liquid chromatography. 1818

POTENTIAL PATHOGENS
Potential bacterial pathogens of insects and their characteristics. 312

POULTRY
Family differences in attractiveness of poultry to the chicken body louse, Menacanthus stramineus (Mallophaga). 1354

Sevin residues in poultry products. 1499

Gossypol extractants: Oral toxicity to poultry of a commercial octylamine. 1571

POULTRY HOUSES
A technique for the statistical sampling of Fannia larval densities on poultry ranches. 206

POULTRY MANURE
Larvicides for the control of house flies in poultry houses. 1327

Acute and subacute toxicity of several insecticides to chicks. 1688

A portable apparatus for separating fly larvae from poultry droppings. 1881

POULTRY MEAT
Supplementation of chick diets with vitamin E to improve meat quality. 1323

Determination of Sevin insecticide and its metabolites in poultry tissues and eggs. 1482

Identification of the metabolites of 3,5-dinitro-o-toluamide -C14 (Zoalene) in chicken tissues. 1862

POWDERY MILDEW (BARLEY)
Genes conditioning pathogenicity in Erysiphe graminis f. sp. hordei on barley variety Atlas 46. 902

POWDERY MILDEW (LETTUCE)
Effects of temperature and moisture stress on the lettuce powdery mildew fungus. 975

PRAIRIES
Wheat crops and native prairie in relation to the nutritional ecology of Camnula pellucida (Scudder) (Orthoptera: Acrididae) in Saskatewan. 1203

PRATYLENCHUS PENETRANS
Increase in the incidence of Verticillium wilt of eggplant in the presence of Pratylenchus penetrans. 903

Population variation of Pratylenchus penetrans and other nematodes associated with roots. 1286

Relationships of population increase of Pratylenchus penetrans to vegetative growth of Wando peas. 1287

Effects of certain phosphorodithioate compounds upon populations of Pratylenchus penetrans. 1298

Growth of apple seedlings in relation to soil temperature and inoculation with Pratylenchus penetrans. 1303

PRATYLENCHUS ZEAE
Hydrolytic and respiratory enzymes of species of Ditylenchus and Pratylenchus. 1299

PRECISION PLANTING
Hand seeder adapted for precision planting or for application of granulated insecticides or fertilizers. 1956

PREDACEOUS INSECTS
Observations on Hypera brunneipennis (Coleoptera: Curculionidae) and certain of its natural enemies in the Near East. 4

Insect parasite and predator studies in a declining sawfly population. 10

Observations on the effectiveness and biology of the European predator Laricobius erichsonnli rosen (Coleoptera:Derodontidae) in Oregon and Washington. 19

Observations on the life history of Antilochus coquerberti, a predator of Dysdercus koenigi. 26

Overwintering females and the number of generations of Typhlodromus (T.) pyri Scheuten (Acarina:Phytoseiidae) in Nova Scotia. 88

The European praying mantis (Mantis religiosa L.) as a predator of the red-legged grasshopper (Melanoplus femurrubrum) (De Geer). 152

Occurrence of the egg parasite Closterocerus cinctipennis in Virginia. 153

The effect of predator age and prey defense on the functional response of Podisus maculiventris Say to the density of Hyphantria cunea Drury. 156

Introducing parasites and predators to control native pests. 177

The clerid beetle, Thanasimus dubius, as a predator of the southern pine beetle. 224

Relationship of predatory and injurious insects in cotton fields in the Salt River Valley area of Arizona. 241

Life-history and behaviour of the predacious mite Typhlodromus (T.) caudigians Schuster (Acarina: Phytoseiidae) in Ontario, with notes on the prey of related species. 570

Techniques for mass-producing Coccinella septempunctata. 600

The influence of spray programs on the fauna of apple orchards in Nova Scotia. XI. effects of low dosages of DDT on predator populations. 1168

Parasitization of corn earworm eggs on sweet corn silk in Southern California, with notes on larval infestations and predators. 1198

Aphidecta obliterata (Coleoptera: Coccinellidae), an introduced predator of the balsam woolly aphid, Chermes piceae (Homoptera: Chermidae), established in North Carolina. 1254

The contact toxicity of some pesticide residues to hymenopterous parasites and coccinellid predators. 1429

An expandable cage for feeding tests of coccinellid predators of aphids. 1954

PRESSURE
Effects of temperature, reduced pressure, and moisture content on sorption and retention of ethylene dibromide by wheat and corn. 1398

PRINCE EDWARD ISLAND

PRINCE EDWARD ISLAND
Aster yellows control in head lettuce and carrots in Prince Edward Island. 1248

PRINCE EDWARD ISLAND
The occurence and life history of the leaf tier, Cnephasia virgaureana Treit. (Lepidoptera: Tortricidae), and its parasites in Newfoundland and Prince Edward Island. 186

PRINCIPE
Biological control of the coconut scale, Aspidiotus destructor Sign., in Principe, Portugese West Africa. 1236

PRIONOXYSTUS ROBINIAE
Tepa for sterilizing male carpenterworms. 622

PRISTIPHORA ERICHSONII
Population and mortality assessment during the egg and larval stages of the larch sawfly, Pristiphora erichsonii (Hgt.). 102

Effects of water levels on the overwintering survival and emergence of the larch sawfly in a bog habitat. 104

History of larch sawfly outbreaks and their effect on tamarack stands in Manitoba and Saskatchewan. 158

The external morphology of the adults and ultimate larval instar of the larch sawfly, Pristiphora erichsonii (Htg.) (Hymenoptera: Tenthredinidae). 254

PRIVIES
Control of house flies in outdoor privies with larvicides. 1636

PRO-NOXFISH
Studies on the chronic toxicity of Pro-Noxfish, a proprietary synergized rotenone fish-toxicant. 1558

PROPYLENE OXIDE
Sterilization of agar media with propylene oxide. 1840

PROTEIN SYNTHESIS
Protein synthesis by nongerminated fungal spores including uredospores of the bean rust fungus. 1002

PROTEINS
The response of Hylemya antiqua adults to hydrolized proteins and other materials: a laboratory study. 550

Changes in potato proteins induced by fungus infections. 1000

Action of Latrodectus mactans tredecimguttatus venom and fractions on cells cultivated in vitro. 1705

Effect of gibberellic acid on the extraction of protein from the leaves of spring vetches (Vicia satina L.). 1730

PROTOZOA
The host-parasite relationship of the European corn borer, Ostrinia nubilalis, and the protozoan, Perezia pyraustae, in Delaware. 229

Effects of protozoan parasites and commensals on larvae of the mosquito Aedes communis (DeGeer) (Diptera: culicidae) at Churchill, Manitoba. 669

PRUNE DWARF (CHERRIES)
Serological differentiation of prune dwarf and sour cherry necrotic ringspot viruses. 809

PRUNES
Virus infection not the cause of earliness in three strains of Italian prune. 871

PRUNUS
DNA content of Prunus leaf tissue. 1728

PRUNUS AMYGDALUS
The role of fumaric acid, a fungal toxin, involved in the hull rot disease of almond. 894

A quantitative method for determining fumaric acid, a toxin involved in the hull rot disease of almond. 895

PRUNUS MAHALEB
Juice transmission of cucumber mosaic virus to mazzard and mahaleb cherry. 923

PRUNUS SERRULATA
Flowering cherry, a reservoir of the little cherry virus. 1043

PRYMNESIUM PARVUM
Observations on the mechanism of action and on the quantitative assay of ichthyotoxin from Prymnesium parvum Carter. 1813

PSALLUS SERIATUS
Resistance of experimental cotton strain 1514 to the bollworm and cotton fleahopper. 1170

Experimental insecticides applied as sprays to control thrips and the cotton fleahopper. 1584

PSEUDALETIA UNIPUNCTA
Evaluation of apholate and tepa as chemosterilants for the fall armyworm. 1715

PSEUDO-CURLY TOP DISEASE
The pseudo-curly top disease in south Florida. 992

PSEUDO-CURLY TOP VIRUS
Life-history and behavioral studies on Micrutalis malleifera, a vector of pseudo-curly top virus. 609

PSEUDO-CURLYTOP VIRUS
An incidence on Long Island, N.y. of Micrutalis calva, a close relative of the vector of pseudo-curlytop virus. 879

PSEUDOCOCCIDAE
The control of Ripersia oryzae green, a mealybug of the paddy plant in West Bengal. 1550

PSEUDOCOCCUS MARITIMUS
Distribution of the grape mealybug on pear. 243

Developments in control of the grape mealybug. 1149

Behavior and control of the grape mealybug on pear. 1173

PSEUDOMONAS
Variation in isolates of Pseudomonas associated with blast and canker of fruit trees in California. 798

PSEUDOMONAS SOLANACEARUM
Virulence of Pseudomonas solanacearum as influenced by proportion of virulent to avirulent cells. 729

Strains of Pseudomonas solanacearum in indigenous hosts in banana plantations of costa rica, and their relationship to bacterial wilt of bananas. 754

Changes in the oxidation rates of polyphenols and ascorbic acid in tobacco stem tissues invaded by Pseudomonas solanacearum. 878

Occurrence of Pseudomonas solanacearum in virgin soils in costa rica. 980

Pseudomonas solanacearum in Israel. 1029

PSEUDOMONAS SYRINGAE
Susceptibility of mazzard seedlings to Pseudomonas syringae. 764

The source of inoculum for bacterial canker and blast of stone fruit trees. 799

PSEUDOMONAS TABACI
Population studies of Pseudomonas tabaci in diploid. triploid, and tetraploid Nicotiana tabacum plants with different doses of the Nicotiana longiflora gene for resistance. 997

PSEUDOTSUGA MENZIESII (MIRB) FRANCO
The life history and habits of Scolytus unispinosus Leconte (Coleoptera: Scolytidae) in the interior of british Columbia. 148

PSEUDOTSUGA MENZIESII
Life history and habits of a midge, Contarinia washingtonensis Johnson (Diptera: Cecidomyiidae), in Douglas-fir cones. 86

Field studies on flight patterns and olfactory responses of ambrosia beetles in Douglas-fir forests of western Oregon. 201

Thermal death range of sclerotia of Macrophomina phaseoli. 741

A test of systemic insecticides to control Douglas-fir cone and seed insects. 1630

PSILA ROSAE
Continuous rearing of the carrot rust fly, Psila rosae (Fab.). 145

Integrated control of cyclodiene-resistant carrot rust fly. 1111

Contact toxicity of ten insecticides to adults of the carrot rust fly. 1658

PSOROSIS
Local lesions in psorosis. 745

Absence of young-leaf symptoms of psorosis in the state of Bahia, Brazil. 930

Transmission of psorosis virus by dodder. 938

Study of psorosis in Concordia, Argentina. 940

Cross-protection studies with strains of concave gum and psorosis viruses. 952

Incidence of different types of psorosis in citrus varieties in the state of Sao Paulo. 954

PSYLLA PYRICOLA
Observations on the natural control of the pear psylla, Psylla pyricola Forster, in California. 140

Downy chess grass as a host of the pear psylla. 247

Insecticide resistance in the pear psylla. 422

PSYLLIDAE
Tests with systemic insecticides for control of insects and certain diseases on potatoes. 1125

PUBLIC HEALTH ENTOMOLOGY
Recent developments in public health entomology and their possible application to agriculture. 715

PUCCINIA CARTHAMI
The diploid nucleus of Puccinia carthami in unstained water mounts. 1770

PUCCINIA CORONATA
Factors affecting germinability of urediospores of Puccinia coronata. 835

PUCCINIA GRAMINIS AVENAE
Altering the effect of oat rust resistant genes by certain physical means. 1729

PUCCINIA GRAMINIS VAR. TRITICI
Half-life of effectiveness against stem rust of systemic chemicals in wheat seedlings. 727

Production of new races of Puccinia graminis var. tritici by tissue transplants. 810

Some metabolic changes in wheat due to stem rust infection and different temperatures. 812

Relations between inoculum density and infection of wheat by uredospores of Puccinia graminis var. tritici. 935

Survival of physiologic races of Puccinia graminis var. tritici on wheat near barberry bushes. 945

A toxin extracted from Marquis wheat infected by race 38 of the stem rust fungus. 991

Fertilization of pycnia with urediospores in Puccinia graminis var. tritici. 1740

Mutation for pathogenicity in Puccinia graminis var. tritici. 1791

PUERTO RICO
Aedes aegypti feeds on lizards in Puerto Rico. 712

PULLULARIA PULLULANS
Activity of the antibiotic produced by Pullularia pullulans. 1722

PUNCTURE VINE
Parasites of two weevils, Microlarinus lareynii and M. lypriformis, that feed on the puncture vine, Tribulus terrestris L. 269

PUPAE
Immature stages of four Neartic Notodontidae (Lepidoptera). 55

Influence of aeration during gamma irradiation of screw-worm pupae. 289

The effect of temperature on the consumption of fat during pupal development in Glossina. 319

Immature stages of western corn rootworm. 391

Chemosterilization of house flies by treatment in the pupal stage. 400

Pupal size and mortality, longevity, and reproduction of cabbage loopers reared at several densities. 434

A quick method for sex determination of codling moth pupae. 562

The biology and behaviour of the European pine shoot moth Rhyacionia buoliana (Schiff.), in southern Ontario. II. Eggs, larva, and pupa. 567

Characters for determining sex in elm spanworm pupae. 621

Effects of soil moisture on survival of prepupae of the alkali bee. 632

Laboratory emergence of adults from overwintering pupae of the apple maggot, Rhagoletis pomonella (Walsh) (Diptera: Tephritidae). 635

Parasites of the European pine shoot moth, Rhyacionia buoliana. 1127

Plaster of paris as an aid in rearing insects pupating in the soil. 1893

PUPAL CASES
Laboratory and field investigations of the effect of temperature on the development of Neodiprion sertifer (Geoff.) in the cocoon. 237

A method for candling pine sawfly cocoons. 678

PURIFICATION
Partial purification of self-inhibitors of germination from uredospores of Uromyces phaseoli var. typica. 1723

PURIFICATION PROCEDURES
Purification of pesticides:Multimolecular adsorption chromatography for purification of gram quantities of pesticides. 1855

PURSHIA
Insects destructive to bitterbrush flowers and seeds in southwestern Idaho. 1109

PUSTULAR SPOT (PEACHES)
Observations on pustular spot on peaches. 1378

PYCNIA
Fertilization of pycnia with urediospores in Puccinia graminis var. tritici. 1740

PYRACANTHA
The biology of Oligonychus platani on pyracantha. 22

PYRETHRUM
The effect of radiation to pyrethrins applied to cattle. 1356

Toxicologic studies on pyrethrin-type esters of chrysanthemumic acid. I. Chrysanthemumic acid, 6-chloropiperonyl ester (Barthrin). 1540

PYRIDINETHIONES

Pyrethrum reaction aerosol. 1587

Effect of sesamex on toxicities of individual pyrethrins. 1569

The stabilising effect of piperonyl butoxide on pyrethrins exposed to ultra-violet light. 1590

Effects of additives on the toxicity of pyrethrins to stable flies and horn flies. 1681

Insecticide assay:Chromatographic separation of active components of natural pyrethrins and their characterizations. 1819

PYRIDINETHIONES
Toxicology of pyridinethiones. 1713

P32
Water and food relationship of the eggs and first instar nymph of Eurygaster integriceps with the aid of P32. 574

Uptake, transfer, and loss of P32 during metamorphosis, mating, and oviposition in Aedes vexans. 575

QUANTITATIVE ANALYSIS
A quantitative method for determining fumaric acid, a toxin involved in the hull rot disease of almond. 895

Pesticide residues:Modified and improved procedure for Schoniger total chlorine residue analysis. 1524

Observations on the mechanism of action and on the quantitative assay of ichthyotoxin from Prymnesium parvum Carter. 1813

Insecticide assay: Assay of Co-Ral in technical material and formulated products. 1838

QUARANTINE
Quarantine problems associated with the importation of bananas from Mexico. 794

QUATERNARY AMMONIUM COMPOUNDS
Quaternary ammonium compounds for the surface sterilization of insects. 513

QUATERNARY SALTS
Mode of action of dipyridyl quaternary salts as herbicides. 1620

QUEBEC
Emergence and flight of click beetles (Coleoptera: Elateridae) in organic soils of southwestern Quebec. 122

A list of trichoptera taken at Montreal and Chambly, Quebec, with descriptions of three new species. 159

A list of the Tabanidae (Diptera) of Quebec. 173

Further field experiments on the use of Bacillus thuringiensis and chemical insecticides for the control of the european corn borer, Ostrinia nubilalis, on sweet corn in southwestern quebec. 1139

QUEEN BEES
A survey of the incidence of nosema disease in California. 366

Studies on rearing honey bee larvae in the laboratory. I. The effect of royal jelly taken from different ages of queen cells on queen differentiation. 527

QUEENSLAND FRUIT FLY
Control of the Queensland fruit fly by gamma irradiation. 504

QUERCUS
House fly breeding in oak sawdust and peanut hulls used as bedding in calf pens. 135

Bionomics of the bark beetle Pseudopityophthorus pruinosus with special reference to its role as a vector of oak wilt, Ceratocystis fagacearum. 188

Occurrence of the sclerotial state of Ciborinia candolleana (Lev.) Whet in the United States of America. 737

The effects of temperature and moisture on oak wilt development. 837

Physalospora obtusa (Cke.) Winter on South Carolina live oaks. 994

QUERCUS SUBER
The twig oak wasp of cork oak- Its biology and control. 1

RABBITS
Tests with systemic insecticides in rabbits as toxicants for body lice. 1331

RACE 264
Oat varieties with adult plant field resistance to race 264 of crown rust. 1012

RACE 38
A toxin extracted from Marquis wheat infected by race 38 of the stem rust fungus. 991

RADIATION
The effect of radiation to pyrethrins applied to cattle. 1356

RADIOACTIVE CONTAMINATION
Determination of fallout cesium-137 in animal and plant tissues. 1553

Symposium on radioactive fallout in relation to foods. 1598

Some considerations of present biospheric contamination by radioactive fallout. 1842

RADIOACTIVE SUBSTANCES
Herbicide uptake from soils: Uptake of radioactive ethyl-N,N-)DI-N-PROPYLTHIO carbamate (EPTC-S35) and translocation of sulfur-35 in various crops. 1409

Depth of feeding as it affects the concentration of radioactivity within the plant. 1732

Movement of radioisotopes in Rhizoctonia solani. 1775

Uptake of radioactive fission products by crop plants. 1781

Absorption of radionuclides by aboveground plant parts and movement within the plant. 1799

RADIOACTIVE TRACERS
Metabolism of labeled glutamic acid in adult German cockroaches. 511

Metabolism of and residues associated with dermal and intramuscular application of radiolabeled Fenthion to dairy cows. 1350

RADIOBIOLOGY
Biological effects of SR90 in miniature swine. 1572

RADIOGRAPHY
A comparison of radiograph analysis and bark dissection in estimating numbers of western pine beetle. 43

Use of radiography to detect mortality of California flatheaded borers in pine bark. 1986

RADIOLOGY
Biochemical-radiological determinations of parathion resistance in Aedes micromaculis. 523

RADIONUCLIDES
Radionuclides in milk. 1563

Absorption of radionuclides by aboveground plant parts and movement within the plant. 1799

RADISH YELLOWS VIRUS
Radish yellows, a disease of radish, sugar beet and other crops. 793

RADISHES
Radish yellows, a disease of radish, sugar beet and other crops. 793

Control of root maggots on radish, turnip, and rutabaga in Wisconsin. 1099

RADOPHOLUS SIMILIS
Movement of Radopholus similis into rough lemon feeder roots and in soil, and its relation to Fusarium in the roots. 1290

Citrus varieties, hybrids, species and relatives evaluated for resistance to the burrowing nematode, Radophus similis. 1292

RAGDOLL METHOD
Differentiation of oat Helminthosporia by the ragdoll method. 842

RAINFALL
Effect of pre-emergence rainfall on population size in the tobacco hornworm. 93

RAMOSIA TIPULIFORMIS
Field and laboratory studies on control of currant borer. 1702

RASP LEAF (CHERRIES)
Leaf enations in apple inoculated from cherry. 869

RATOON STUNT (SUGARCANE)
Viruslike particles associated with the ratoon stunting disease of sugarcane. 803

RATS
Metabolism of two forms of dietary arsenic by the rat. 1503

Growth, reproduction, mortality, and pathologic changes in rats fed gamma irradiated potatoes. 1562

Storage and excretion of DDT in starved rats. 1582

The acute toxicity of pesticides to rats. 1602

Stimulatory effects of chlordane on hepatic microsomal drug metabolism in the rat. 1610

Concentration of DDT in brain and other tissues in relation to symptomatology. 1611

Toxicologic studies with branched and linear alkyl benzene sulfonates in rats. 1662

Effects of venom from the scorpion, Centruroides sculpturatus on the rat. 1667

The metabolism of s-propyl-1-C14 n-butylethylthiocarbamate (Tillam-C14) in rats. 1826

REARING
Improved laboratory techniques for rearing California red scale on lemons. 645

RECOVERY STUDY
Florescent dyes for mating and recovery studies with cabbage looper moths. 659

RECURVARIA MILLERI
Sequential sampling for the lodgepole needle miner, Evagora milleri. 221

RED CLOVER
Occurrence of asiatic oak weevil in alfalfa and red clover in maryland. 101

The mechanism of wilting incited by Fusarium in red clover. 769

Clones of red clover resistant to four isolates of bean yellow mosaic virus. 784

A population of self-fertile red clover necrotic-spotting with a strain of bean yellow mosaic virus. 785

Host range, pathogenicity, and taxonomy of Ascochyta imperfecta. 796

Formation of local lesions on Gomphrena globosa by viruses from red clover. 817

Population development of Meloidogyne arenaria in red clover. 1281

Nematodes associated with red clover in its second growth year. 1301

RED PINE SCALE
Evidence for a sex attractant in females of the red pine scale. 359

RED-PINE NEEDLE MIDGE
Parasites associated with the red-pine needle midge Thecodiplosis piniresinosae Kearby. 459

RED-WINGED BLACKBIRD
A laboratory method for evaluating chemicals as bird repellents. 1321

REDPEPPERS (VEGETABLE)
Insecticide experiments to control green peach aphid and pepper weevil on peppers. 373

REFRIGERATION
Extension of the incubation period of southwestern corn borer eggs by refrigeration. 636

REPELLENCY TESTS
Field and laboratory repellency tests with 2,2,4-trimethyl-1,3-pentanediol (TMPD). . 392

REPRODUCTION
The reproductive capacity of female Boophilus annulatus collected from cattle dipped in arsenic or coumaphos. 403

Laboratory screening of insecticides for the prevention of reproduction of Boophilus ticks. 404

Reduction in reproductive capacity of european red mite by niagara 9203. 415

Effects of tepa on reproduction of codling moths. 429

Inhibition of reproduction of Indian meal-moths, Plodia interpunctella, by exposure to amplified sound. 473

The reproduction-diapause approach to population control of the boll weevil. 497

The effects of DDT and sublethal doses of dicofol on reproduction of the two-spotted spider mite. 578

Factors that affect reproduction of the garden symphylan, Scutigerella immaculata. 601

Effect of temperature and host plants on progeny production of four biotypes of corn leaf aphid, Rhopalosiphum maidis. 610

Feeding and reproduction of some stored-product mites on seed-borne fungi. 611

Melon fly eradication by overflooding with sterile flies. 625

Crossbreeding studies with seven species of Trogoderma. 637

Reproductive potential of the sweetpotato weevil after exposure to ionizing radiations. 666

Suppression of the reproductive potential of the codling moth by gamma irradiated males in caged orchard trees. 709

Mating competition of gamma-irradiated and nonirradiated male Trogoderma glabrum Herbst. 710

REPRODUCTIVE HISTORY
Mating and reproductive history of blacklight-trapped cranberry fruitworm moths. 653

REPRODUCTIVE ORGANS
The male genitalia in Gryllinae (Orthoptera: Gryllidae) and a tribal revision. 184

The female genitalia of four species of tiger beetles (Coleoptera: cicindelidae). 385

Effects of tepa on the reproductive organs and embryogeny of the german cockroach. 617

RESIDUES
Residues of Sevin in whole milk from sprayed and dusted cows. 1455

RESINS
Sevin residues in poultry products. 1499

RESINS
Polymerization as a means of prolonging effectiveness of orally administered systematic insecticides. 521

Toxicity of pine resin vapors to three species of Dendroctonus bark beetles. 1695

RESISTANCE
A technique of continuous exposure for determining resistance of house flies to insecticides. 306

Mass rearing of the cabbage maggot under controlled environmental conditions, with observations on the biology of Cyclodiene-susceptible and resisting strains. 424

Varietal resistance of beans to the Mexican bean beetle. 1078

RETICULITERMES FLAVIPES
Response of the eastern subterranean termite to an attractive extract from Lenzites trabea-invaded wood. 618

REVIEWS
Bibliography of reviews, 1949-1959. 716

RHAGOLETIS POMONELLA
Natural source of food of the apple maggot. 240

Artificial diets for the apple maggot, Rhagoletis pomonella. I. Mass rearing on certain diets. 548

Fumigation of apples to control the apple maggot, Rhagoletis pomonella. 1224

Bulk fumigation of apples with ethylene dibromide under plastic tarpaulins for apple maggot. 1225

Artificial oviposition devices for apple maggot. 1958

RHIZOCTONIA
Saprophytic activity and survival of Rhizoctonia in soil as affected by some ecological factors. 1783

RHIZOCTONIA SOLANI
Movement of radioisotopes in Rhizoctonia solani. 1775

RHIZOPUS
The role of fumaric acid, a fungal toxin, involved in the hull rot disease of almond. 894

RHODODENDRONS
Rust fungi on native and cultivated rhododendrons in California. 921

RHOPALOSIPHUM MAIDIS
Effect of temperature and host plants on progeny production of four biotypes of corn leaf aphid, Rhopalosiphum maidis. 610

Controlling the corn leaf aphid, Rhopalosiphum maidis, in greenhouses. 1253

Effectiveness of insecticides against the corn leaf aphid in sorghum whorls. 1614

RHYACIONIA BUOLIANA
Flight and dispersal of the European shoot moth, Rhyacionia buoliana (Schiff.) I. Factors affecting flight and the flight potential of females. 72

Flight and dispersal of the European pine shoot moth, Rhyacionia buoliana (Schiff.) II. Natural dispersal of egg-laden females. 73

Low winter temperatures and the European pine shoot moth, Rhyacionia buoliana (Schiff.) in Ontario. 407

Parasites of the European pine shoot moth, Rhyacionia buoliana. 1127

Granular applicaltion of systemics for control of european pine shoot moth. 1154

RHYACIONIA FRUSTRANA
Response of the nantucket pine tip moth to attractants. 689

RHYNCHOPHORA
A way to distinguish sex of adult Hylobius weevils in the field. 250

RHYNCHOSPORIUM SECALIS
Variation in pathogenicity in Rhynchosporium secalis. 858

Induced color mutants in Rhynchosporium secalis. 1754

RICE
A biological and ecological study of the rice pentatomid bug dept. of agriculture, peradeniya, ceylon Scotinophara lurida (Burm.) in.Ceylon. 56

Characteristics of plant-virus inhibitors in rice, Oryza sativa. 846

Hoja blanca transmission studies on rice. 889

The infestability of stored paddy by Sitophilus sasakii (Tak.) and Rhyzopertha dominica (F.). 1074

Effect of common variables in rice production on rice water weevil control. 1221

Effect of infestation by the rice stink bug, Oebalus pugnax on yield and quality in rice. 1246

Studies of phosphine as a fumigant for sacked rice under gas-tight tarpaulins. 1381

The control of Kipersia oryzae green, a mealybug of the paddy plant in West Bengal. 1550

RICE STEM BORER
The role of new insecticides for control of rice stem borer in Orissa. 1232

RICHMONDENA CARDINALIS (L.)
Insects and other invertebrates from nests of the cardinal, Richmondena cardinalis (L.), at London, Ontario. 107

RING SPOT (FRUIT)
Heat inactivation of stone fruit ringspot virus. 922

RING SPOT (TOBACCO)
The natural occurrence of tobacco ringspot virus. 1022

RIO GRANDE VALLEY
Bollworm and tobacco budworm resistance to some insecticides in lower rio grande valley in 1964. 502

Control of three important cotton insects in the lower Rio Grande Valley in 1960. 1188

ROCKY MOUNTAINS
Several species of Pholiota associated with root and butt rots of Rocky Mountain conifers. 782

RONNEL
Field resistance of horn flies to the organic phosphate insecticide ronnel. 317

Resistance to ronnel in a strain of horn flies. 428

Anticholinesterases in blood and cattle grubs from cattle treated with ronnel. 445

In vivo oxidation of ronnel in the Madeiria cockroach. 446

Low level feeding of ronnel in a mineral salt mixture for area control of the face fly, Musca autumnalis. 1362

Field tests with low-level feeding of ronnel for control of cattle grubs and horn flies. 1394

RONNEL MINERAL BLOCK
Free choice feeding of ronnel mineral block and granules for face fly, horn fly, and cattle grub control. 1347

RONNEL MINERAL GRANULES
Free choice feeding of ronnel mineral block and granules for face fly, horn fly, and cattle grub control. 1347

ROOSTOCK
Variability of cachexia reactions among varieties of rootstocks and within clonal propagations of citrus. 759

ROOT DIP TREATMENT
Nematode control on roses with root dip treatments. 1319

ROOT DISEASE
A root disease of fuchsia caused by Phytophthora parasitica. 931

ROOT KNOT (COTTON)
Resistance to the root-knot nematode, Meloidogyne incognita acrita, in upland cotton seedlings. 1280

ROOT KNOT NEMATODE
Preliminary studies with DBCP cotton seed treatment for controlling the root-knot nematode. 1307

ROOT ROT (CLOVER)
Relationship between injury by the clover root curculio and incidence of Fusarium root rot in Ladino white clover. 820

ROOT ROT (CONIFERAE)
Several species of Pholiota associated with root and butt rots of Rocky Mountain conifers. 782

ROOT ROT (FUCHSIA)
The influence of temperature on development of Phytophthora parasitica root rot of Fuchsia. 932

ROOT ROT (LILIUM LONGIFLORUM)
Effectiveness of chemical dip treatments on the culture of Croft lilies. 1741

ROOT ROT (LUPINES)
Phytophthora root and stem rot of lupines. 845

ROOT ROT (PEAS)
Soil indexing for pea root rot and the effect of root rot on yield. 943

ROOT ROT (PEPPER)
Resistance to Phytophthora root rot in pepper. 856

ROOT ROT (SAFFLOWER)
Development of safflower varieties resistant to Phytophthora root rot. 1013

ROOT WEEVIL
The life history and control of Nemocestes incomptus (Horn), a native root weevil attacking strawberries in western Washington. 52

ROOT-KNOT NEMATODES
The use of nematode-trapping fungi to control root-knot nematodes. 1304

ROOTS
Isolation of olpidium brassicae from roots of lettuce showing big-vein symptoms. 734

Behavior of some Bartlett pear trees on their own roots. 746

A bacterial brown rot of parsnip roots. 756

Evaluation of soil fungicides against Fusarium solani isolated from feeder roots of citrus trees. 767

Effect of soil temperature on pathogenesis of Thielaviopsis basicola on sweet orange roots. 1020

Chemotaxis of zoospores for root exudates in relation to infection by Phytophthora cinnamomi. 1055

Control of root maggots on radish, turnip, and rutabaga in Wisconsin. 1099

Population variation of Pratylenchus penetrans and other nematodes associated with roots. 1286

Recovery of nematodes from infected roots by enzyme preparations. 1288

Movement of Radopholus similis into rough lemon feeder roots and in soil, and its relation to Fusarium in the roots. 1290

Nematodes associated with rootlets of western white pine in northern Idaho. 1306

Chemical control of plant-parasitic nematodes in plant roots. 1312

Persistence and translocation of exogenous regulating compounds that exude from roots. 1762

ROOTSTOCK
Exocortis and other problems with trifoliate orange rootstock. 939

Viruses in sweet lime rootstock in Bella Vista, Corrientes. 949

Reaction of types of citrus as scion and as rootstock to xyloporosis virus. 968

Incidence of bud-union crease in citrus trees grafted on trifoliate rootstock in the Delta del Parana and San Pedro areas of Argentina. 1023

ROOTSTOCKS
Tristeza tolerant rootstocks - their behavior after twelve years in orchard. 897

ROSA
Hairy root of field roses. 907

Flower thrips in outdoor rose fields and an improved method of extracting thrips from rose flowers. 1133

Nematode control on roses with root dip treatments. 1319

A technique for testing acaricide residues against two-spotted spider mites on field-grown roses. 1480

ROSENTHAL S TEST
Acaricide residues:A modification of the Rosenthal method for rapid determination of Kelthane residues. 1462

ROT (APPLES)
Botryosphaeria ribis and its relation to a rot of apples. 807

ROT (OATS)
Cochliobolus victoriae, the perfect stage of Helminthosporium victoriae. 917

ROT (SUGARCANE)
Studies on the Phytophthora rot of sugarcane seed pieces in Louisiana. 723

ROT (TOMATOES)
Pathogenicity and taxonomy of Geotrichum candidum. 758

ROTENONE
Studies on the chronic toxicity of Pro-Noxfish, a proprietary synergized rotenone fish-toxicant. 1558

ROYAL JELLY
Studies on rearing honey bee larvae in the laboratory. I. The effect of royal jelly taken from different ages of queen cells on queen differentiation. 527

RUELENE
Absoption and metabolism of Ruelene by arthropods. 305

Cytological and genetic studies on the effect of Ruelene. 707

Area population control of heel flies by Ruelene pour-on application annually to cattle. 1355

Cattle grub control with ruelene as a dip and a pour-on treatment. 1357

RUGA VERRUCOSANS
An incidence on Long Island, N.y. of Micrutalis calva, a close relative of the vector of pseudo-curlytop virus. 879

RUNNER BEANS
Variation in susceptibility of soybean pubescent types, broad bean, and runner bean varieties and plant introductions to the potato leafhopper. 1271

RUST (BEANS)
Effects of postinoculation temperatures on rate of bean rust symptom development. 972

A high-temperature-induced local necrosis associated with the bean rust disease. 973

RUST (RHODODENDRONS)

Protein synthesis by nongerminated fungal spores including uredospores of the bean rust fungus. 1002

A new race of bean rust in Maryland. 1054

Turnover of certain Krebs citric-acid intermediates in healthy and rusted tissues. 1756

RUST (RHODODENDRONS)
Rust fungi on native and cultivated rhododendrons in California. 921

RUST (WHEAT)
Turnover of certain Krebs citric-acid intermediates in healthy and rusted tissues. 1756

RUSTY SPOT (PEACHES)
Rusty spot of peach and its control in New Jersey. 781

RUTABAGAS
Control of root maggots on radish, turnip, and rutabaga in Wisconsin. 1099

Naturally occurring insecticides in cruciferous crops. 1760

S-PROPYL-1-C14 N-BUTYLETHYLTHIOCARBAMATE
The metabolism of s-propyl-1-C14 n-butylethylthiocarbamate (Tillam-C14) in rats. 1826

SACBROOD
Transmission of sacbrood disease to individual honey bee larvae. 439

SADDLE-BACKED LOOPER
Laboratory study on the contact toxicity of DDT to Ectropis crepuscularia Schiff. 1674

SAFFLOWER
Development of safflower varieties resistant to Phytophthora root rot. 1013

Further studies of damage to safflower plants by thrips and lygus bugs. 1080

Damage to safflower plants by thrips and lygus bugs and a study of their control. 1081

SAISSETIA OLEAE
Control of black scale in Florida. 1076

SALTS
Effects of salts, detergent, and a barley-juice factor on stability of barley stripe mosaic virus. 750

Salt injury to trees. 1618

Growth retardants and plant vigor:Increasing tolerance of soybean plants to some soluble salts through application of plant growth-retardant chemicals. 1769

SAMPLE DESIGNS (INSECTS)
A method to determine progressive mortality during seasonal development of Douglas-fir beetle brood. 64

SAMPLING
A sampling technique for population and mortality factors of the fruit-tree leaf roller, Archips argyrospilus (Wlk.) (Lepidoptera: Tortricidae), on apples in Quebec. 170

A comparison of two sampling methods for estimating population trends of thrips and mites on potatoes. 179

A sequential sampling plan for determining the status of corn earworm control in sweet corn. 684

Photography in mite counting. 1872

A spear for sampling bulk grain by suction. 1882

An inexpensive portable suction insect sampler. 1919

An automatic sample-changing device for light-trap collecting. 1933

Sampling mites on peach leaves with the Henderson-McBurnie machine. 1959

SAMPLING (STATISTICS)
The spatial distribution of two pine sawflies and methods of sampling for the study of population dynamics. 133

A technique for the statistical sampling of Fannia larval densities on poultry ranches. 206

Sequential sampling for the lodgepole needle miner, Evagora milleri. 221

A sampling unit for the jack-pine budworm, Choristoneura pinus. 1156

SAND
Availability of dieldrin to adult Blissus leucopterus and larval Cyclocephala immaculata in treated sand, loam, and muck soils. 1418

SANITATION CONTROL (INSECTS)
The incidence, importance, and control of insects found in stored food and food-handling areas of ships. 1386

SANNINOIDEA EXITIOSA
Control of the peach tree borer on young peach trees by a treatment before planting. 1239

Peach tree borer experiments in peach orchards. 1240

SANTOMERSE NO.3
Chronic toxicity of Santomerse no.3 from Diefin (dodecyl benzene sodium sulfonate). 1669

SAO PAULO
Incidence of different types of psorosis in citrus varieties in the state of Sao Paulo. 954

Stem pitting and decline of Pera sweet oranges in the state of Sao Paulo. 960

SAP STAIN (WOOD)
Some sap-stain fungi found in Minnesota. 765

SAPROPHYTES
Saprophytic activity and survival of Rhizoctonia in soil as affected by some ecological factors. 1783

SAPWOOD
Some sap-stain fungi found in Minnesota. 765

SASKATCHEWAN
Adult Elateridae of southern Alberta, Saskatchewan and Manitoba (Coleoptera). 14

Surveys of adult grasshoppers in Saskatchewan in relation to seasonal development. 193

Wheat crops and native prairie in relation to the nutritional ecology of Camnula pellucida (Scudder) (Orthoptera: Acrididae) in Saskatewan. 1203

SATHROBROTA RILEYI
Biology of the pink scavenger caterpillar and its control in corn. 1103

Damage to corn by the pink scavenger caterpillar and its relationship to corn earworm and rice weevil damage. 1243

SAWDUST
House fly breeding in oak sawdust and peanut hulls used as bedding in calf pens. 135

SCALD (APPLES)
Superficial scald, a functional disorder of stored apples. II. Promoters and inhibitors. 838

SCALES (INSECTS)
A field test with insecticides to control the scale Fiorinia externa on Canadian hemlock. 1258

SCHISTOCERCA GREGARIA
Tests for parthenogenesis in migratory, differential, and desert grasshoppers. 285

SCHIZAPHIS GRAMINUM
Field populations on three grain aphid species in Western Oregon. 409

Effect of foliage infestation of the english grain aphid on yield of triumph wheat. 1275

Systemic insecticides to control greenbugs on spring planted barley. 1382

SCHONIGER TOTAL CHLORINE RESIDUE ANALYSIS
Pesticide residues:Modified and improved procedure for Schoniger total chlorine residue analysis. 1524

SCION
Reaction of types of citrus as scion and as rootstock to xyloporosis virus. 968

SCLEROTIA
Occurrence of the sclerotial state of Ciborinia candolleana (Lev.) Whet in the United States of America. 737

Thermal death range of sclerotia of Macrophomina phaseoli. 741

SCLEROTINIA
Broad spectrum fungicides tested for control of melting-out of Kentucky bluegrass and Sclerotinia dollar spot of Seaside bentgrass. 779

SCLEROTINIA SCLEROTIORUM
Sclerotina blight of gloxinia. 832

SCOLYTIDAE
Field selection of different log odors by scolytid beetles. 1083

Bark beetle mortality in trees injected with cacodylic acid (herbicide). 1570

Improved hydrostatic pressure gauge methods for measuring oleoresin exudation pressure in bark beetle research. 1871

SCOLYTUS VENTRALIS
Observations on mortality factors of the fir engraver beetle, Scolytus ventralis (Coleoptera:Scolytidate). 218

SCOPOLIN
Scopolin production in potato tubers infected with Phytophthora infestans. 839

SCORCH
Thiocyanate scorch on grassland. 1420

SCORPIONIDA
Laboratory studies of the effect of Dri-Die 67 on the tatus. 586

Effects of insecticides on the scorpion Centruroides vittatus. 1646

Effects of venom from the scorpion, Centruroides sculpturatus on the rat. 1667

Biochemical studies of the venom from the scorpion, Centruroides sculpturatus. 1707

SCREENS
Further observations on the effectiveness of chemically treated screens in killing biting midges, Culicoides sanguisuga (Diptera: Ceratodogonidae). 1932

SCUTIGERELLA IMMACULATA
Factors that affect reproduction of the garden symphylan, Scutigerella immaculata. 601

The activity of some insecticides against the garden symphylan, Scutigereila immaculata. 602

SD 9129
Laboratory and field evaluation of SD 9129 as an insecticide. 1579

SEASONAL ACTIVITY (INSECTS)
Lipid content of the alfalfa weevil as related to seasonal activity. 291

SEASONAL APPLICATIONS
Early-season application of DDT for pink bollworm control. 1082

SEASONAL VARIATION
Seasonal variations in the fat content and size of Glossina swynnertoni Austen. 397

SEDUM AMECAMECANUM
Fusarium wilt of Sedum. 942

SEED ANALYSIS
The question of seed transmission of cachexia-xyloporosis virus. 772

Evidence that xyloporosis virus does not pass through seeds of Palestine sweet lime. 925

SEED DETERIORATION
Seed deterioration as a factor in nub-root production in cotton. 1041

SEED DRESSING
Gamma-BHC liquid seed dressing for the control of turnip flea beetle. 1143

SEED DRESSINGS
Effect of formulation on toxicity to plants and insects of some systemic insecticidal seed dressings. 1546

SEED GERMINATION
The effect of environment on germination of sporidia in Cronartium ribicola. 740

Factors affecting germinability of urediospores of Puccinia coronata. 835

Germination of oospores of Aphanomyces euteiches embedded in plant debris. 970

Germination of alfalfa seed treated with dry and liquid formulations of di-syston and phorate. 1222

Method of chlamydospore germination of isphacelotheca reiliana in soil. 1721

Partial purification of self-inhibitors of germination from uredospores of Uromyces phaseoli var. typica. 1723

The effect of nutrition on germination of conidia of Helminthosporium sativum in natural soil. 1727

Relations of spore moisture to spore shape and germination reaction to temperature. 1782

SEED INSECTS
A test of systemic insecticides to control Douglas-fir cone and seed insects. 1630

SEED MAGGOTS
Distribution of cyclodiene-insecticide resistance in the seed maggot complex in relation to cropping practices in southwestern Ontario. 84

SEED PLANTING EQUIPMENT
A plot seeder modified to apply seed and granular insecticides simultaneously. 1955

SEED POTATOES
Green peach aphid distribution and potato leafroll virus occurrence in the seed-potato producing areas of Idaho. 744

SEED TREATMENT
Ovipositional habits of the rice water weevil California as related to a greenhouse evaluation of seed treatments. 410

Selective protection afforded by certain seed and soil fungicides. 864

A seedling test for detecting viable Ustilago nuda mycelium following barley seed treatments. 899

Seed treatment with phorate, disulfoton, and other insecticides to control pea insects in Iraq. 1060

Gamma-BHC liquid seed dressing for the control of turnip flea beetle. 1143

Effect of common variables in rice production on rice water weevil control. 1221

The influence of fertilizers on sugar beets which received insecticide-fungicide seed treatments. 1230

Preliminary studies with DBCP cotton seed treatment for controlling the root-knot nematode. 1307

SEED WEEVIL

Two new compounds as seed and soil treatments. 1416

Effects of low dosages of insecticidal seed-treatments on cotton and cotton insects. 1651

Seed disinfection: Fungicide and dye distribution in liquid seed treatment. 1763

Effects of certain temperatures and seed treatments on emergence and terminal breakdown of cotton seedlings. 1802

SEED WEEVIL
Parasites of two weevils, Microlarinus lareynii and M. lypriformis, that feed on the puncture vine, Tribulus terrestris L. 269

SEED-BORNE FUNGI
Feeding and reproduction of some stored-product mites on seed-borne fungi. 611

SEED-BORNE PLANT DISEASES
Seed transmission of exocortis virus. 966

A virus of wide host range seed-borne in Phaseolus vulgaris. 995

SEEDLING BLIGHT
Cochliobolus victoriae, the perfect stage of Helminthosporium victoriae. 917

Influence of soil temperature on seedling blight of smooth bromegrass. 1014

Effect of growing crops and crop residues on soil fungi and seedling blights. 1045

SEEDLING YELLOWS (CITRUS)
Presence of seedling yellows complex in the citrus of South India. 766

Further studies on citrus seedling yellows. 1034

SEEDLINGS
Half-life of effectiveness against stem rust of systemic chemicals in wheat seedlings. 727

Effect of stem girdling of citrus seedlings on size of Phytophthora gummosis lesions. 788

A technique for determining the reaction of seedling plants to Thielaviopsis basicola. 833

Variation in maize seedling blight symptoms with changes in pathogen species, isolate and host genotype. 857

A seedling test for detecting viable Ustilago nuda mycelium following barley seed treatments. 899

Use of benzimidazole and excised wheat seedling leaves in testing resistance to Septoria tritici. 981

Seed deterioration as a factor in nub-root production in cotton. 1041

Predicting thrips populations on seedling cotton. 1212

Detecting corn seedling differences in the greenhouse by visual classification of damage by the fall armyworm. 1268

Resistance to the root-knot nematode, Meloidogyne incognita acrita, in upland cotton seedlings. 1280

Growth of apple seedlings in relation to soil temperature and inoculation with Pratylenchus penetrans. 1303

Studies on uptake and translocation of C14-labeled p-dimethylaminobenzenediazo sodium sulfonate (Dexon) by sugar beet seedlings. 1747

Effects of certain temperatures and seed treatments on emergence and terminal breakdown of cotton seedlings. 1802

Growing seedlings free of air-borne microflora. 1938

SEEDS
Studies on the Phytophthora rot of sugarcane seed pieces in Louisiana. 723

Evidence that xyloporosis virus does not pass through seeds of Palestine sweet lime. 925

Control of plant bugs and other insects on Kentucky bluegrass grown for seed. 1244

The influence of oil content on the susceptibility of seeds to fumigation with methyl bromide. 1726

SEEDWORM
A new host record for the seedworm Laspeyresia toreuta, with notes on its biology. 29

SEPARAN AP30
Toxicologic investigations of polyacrylamides. 1644

SEPARAN NP10
Toxicologic investigations of polyacrylamides. 1644

SEPTORIA TRITICI
Losses to winter wheat from infection by septoria tritici. 760

Use of benzimidazole and excised wheat seedling leaves in testing resistance to Septoria tritici. 981

SEQUENTIAL SAMPLING
Sequential sampling for the imported cabbageworm, Pieris rapae (L.). 79

Sequential sampling for use in control of the cabbage looper on cauliflower. 1124

SEQUOIA GIGANTEA
Thermal death range of sclerotia of Macrophomina phaseoli. 741

SEROLOGICAL TESTS
Serological relationships between insect viruses and their inclusion-body proteins. 481

Serological differentiation of prune dwarf and sour cherry necrotic ringspot viruses. 809

Serological and biological properties of brome mosaic virus antigens. 827

SERUM
Determination of NN-diphenyl-p-phenylenediamine (DPPD) in fat and other biological materials. 1441

SESAME
Comparison of cultural variants of Alternaria sesame. 743

Corynespora blight of sesame. 1006

Sesame: a new host for tobacco budworm and bollworm. 1220

SESAMEX
Effect of sesamex on toxicities of individual pyrethrins. 1569

SESBANIA GRANDIFLORA (L)
Two varieties of Sesbania grandiflora as fruit fly hosts. 1193

SESONE
Herbicide toxicity:Mammalian toxicity of Sesone herbicide. 1565

SEX
Observations on the role of light, temperature, age, and sex in the response of screw-worm flies to attractants. 347

Change in sex ratio of the eye-spotted bud moth, Spilonota ocellana, over its adult emergence period. 489

Evolution of sexuality and pathogenicity. I. Interspecific crosses in the genus Helminthosporium. 918

SEX ATTRACTANTS
Sex attractants of Heliothis zea and H virescens. 294

Evidence of sex hormones in females of several species of Dermestidae. 316

Evidence for a sex attractant in females of the red pine scale. 359

Use of cyanide in pink bollworm sex-lure traps. 1913

SEX BEHAVIOR
Some sexual differences in the granary weevil Sitophilus granarius (L.). 183

Mating behavior of the screw-worm fly as affected by differences in strain and size. 266

Sexual aggressiveness of male screw-worm flies measured by effect on female mortality. 290

Chemosterilization and mating behavior of male house flies. 327

Some effects of gamma radiation on fertility of Drosophila melanogaster and viability of sperm after multiple matings of males. 436

Effects of gamma radiation on mating competitiveness and behavior of Drosophila melanogaster males. 437

A description of territorial behavior and a quantitative study of its function in males of Hetaerina americana (Fabricius) (Odonata: Agriidae). 454

Mating and oviposition studies of the stable fly. 470

The mating behavior of the boll weevil, Anthonomus grandis. 516

Sexual behavior in blister beetle (Coleoptera: Meloidae) I. The genus Pyrota. 599

Orientation of the males of Aedes aegypti (L.) (Diptera: Culicidae) to sound. 681

SEX DETERMINATION
Methods of sexing and sex ratios of the southern pine beetle, Dendroctonus frontalis Zimm. 169

A color characteristic for sexing live adult Lesser Grain Borers. 220

A way to distinguish sex of adult Hylobius weevils in the field. 250

Characters for determination of sex of the boll weevil. 264

Determination of sex of the Douglas-fir beetle Dendroctonus pseudotsugae Hopkins (Coleoptera: Scolytidae). 452

A quick method for sex determination of codling moth pupae. 562

Characters for determining sex in elm spanworm pupae. 621

SEX HORMONES
Evidence of sex hormones in females of several species of Dermestidae. 316

SEX RATIOS
The sex ratios in Ips triden Mannerheim (Coleoptera: Scolytidae). 96

Ecological and nutritional studies on Coleomegilla maculata DeGeer (Coleoptera: Coccinellidae). II. The effects of different population densities and sex ratios on oviposition. 270

SHEEP
Sheep bot fly control tests with DDVP. . 1672

Preliminary report of selenium toxicity in sheep. 1704

SHELL SD-8447
Evaluation of Shell SD-8447 for control of two sweet corn insects. 1716

SHOT-HOLE (PEACHES)
Peach shot hole in Arizona. 849

SIGATOKA LEAF-SPOT DISEASE
A precision spray technique for evaluating oils for Sigatoka disease control on individual banana leaves in the field. 1890

SILICON
Silicon-containing carbamate insecticides. 1650

SILOS
Equipment for checking fumigation effectiveness in silo bins* 1937

SILVER TOP
Silver top of bluegrass. 1003

SIMULIIDAE
Effects of DDT, as used in black fly larval control, on stream arthropods. 1626

SINNINGIA SPECIOSA
Sclerotina blight of gloxinia. 832

A Myrothecium rot of gloxinias. 1767

SISAL
Health status of sisal plants (Agave sisalana) as related to soils and the mineral composition of their leaves. 1778

SITONA CYLINDRICOLLIS
Plowing for sweetclover weevil control. 1175

SITONA HISPIDULA
Relationship between injury by the clover root curculio and incidence of Fusarium root rot in Ladino white clover. 820

Evaluating the control of the clover root curculio larva on alfalfa. 1114

SITOPHILUS GRANARIUS
Some sexual differences in the granary weevil Sitophilus granarius (L.). 183

The effects of percussion on insect pests of grain. 1066

SITOPHILUS ORYZAE
Field infestation of corn in Indiana by the Angoumois grain moth and a rice weevil. 1223

Damage to corn by the pink scavenger caterpillar and its relationship to corn earworm and rice weevil damage. 1243

Dosage-time relationships between 80:20 (CCL4: CS2) and adult rice weevils, Sitophilus oryzae. 1389

SITOTROGA CEREALELLA
Gross effects of gamma radiation on the Indian-meal moth and the angoumois grain moth. 338

Field infestation of corn in Indiana by the Angoumois grain moth and a rice weevil. 1223

Apparatus for studying feeding and oviposition by Angoumois grain moth adults. 1949

SKIN
Low-volume dermal applications and injections of Co-Ral for systemic control of cattle grubs. 1338

SLUGS
Chemical control of slugs affecting vegetables and strawberries in thePacific Northwest. 1297

SMALL GRAINS
Resistance of small grains to the cereal leaf beetle. 1118

SMUT (BARLEY)
A quick method of preparing barley embryos for loose smut examination. 898

SNAILS
Ethylene oxide fumigants to eliminate quarantinable snails Cochlicella or Theba in cargo. 1402

Methyl bbromide, sulfuryl fluoride, and other fumigants against quarantinable Cochlicella and Theba snails. 1678

SNAKE VENOM
The relationship between the hemorrhagic and lethal activities of japanese mamushi (Agkistrodon halys blomhoffil) venom. 1660

SOD WEBWORM

SOD WEBWORM
Sod webworm control on newlyset tobacco. 1211

SOD WEBWORMS
Studies on sod webworms. II. Oviposition behavior of crambus trisectus under regulated light conditions in the laboratory. 278

Studies on sod webworms. I. Emergence rhythm, mating, and oviposition behavior under natural conditions. 279

SODIUM CHLORIDE
Salt injury to trees. 1618

SODIUM DALAPON
Herbicide uptake and distribution: Synthesis of carbon -14-labeled dalapon and trial applications to soybean and corn plants. 1816

SODIUM PENTACHLOROPHENOXIDE
Effects of the combination of sodium pentachlorophenoxide and liquid lime-sulfur on the brown-rot fungi. 924

SOFT ROT (CHICORY)
Effect of soft rot bacteria and pectolytic enzymes on electrical conductance of witloof chicory tissue. 806

SOFT ROT (POTATOES)
Decay of freshly harvested potatoes in air-tight containers. 1374

SOGATA ORIZICOLA MUIR
Suitability of Oryza and other grasses as hosts of Sogata orizicola Muir. 778

SOIL ADSORPTION
Review of adsorption and desorption of organic pesticides by soil colloids, with implications concerning pesticide bioactivity. 1404

Adsorption of several pre-emergence herbicides by Hawaiian sugar cane soils. 14I4

SOIL ANALYSIS
Soil effects on pesticides:Determination of carbon in organic soils by oxygen flask combustion. I4I2

Two new compounds as seed and soil treatments. 1416

Chlorinated hydrocarbon insecticide residues in soils of urban areas,Battle Creek, Michigan. 1459

Colorimetric determination of 2,6-dichloro-4-nitroaniline in plants and soil. 1517

SOIL COLLOIDS
Review of adsorption and desorption of organic pesticides by soil colloids, with implications concerning pesticide bioactivity. I404

SOIL CONTAMINATION
Herbicide uptake from soils: Uptake of radioactive ethyl-N,N-)DI-N-PROPYLTHIO carbamate (EPTC-S35) and translocation of sulfur-35 in various crops. 1409

Review of disappearance of substituted urea herbicides from soil. 1419

Mechanisms of contamination of alfalfa with heptachlor and heptachlor epoxide. 1442

Uptake of radioactive fission products by crop plants. 1781

Availability of exchangeable and non-exchangeable strontium-90 to plants. 1790

SOIL FAUNA
Flotation technique for extracting eggs of Diabrotica spp. and other organisms from soil. 1944

SOIL FUMIGATION
Selective protection afforded by certain seed and soil fungicides. 864

Evaluation of crops rotation and soil fumigation for controlling the soybean cyst nematode. 1289

Effects of soil fumigants on the occurrence of nematodes in field bins. 1305

Mechanism of detoxication and synergism of Bidrin insecticide in house flies and soil. 1606

Field evaluation of organophosphate insecticides as soil treatments for the control of Hippelates gnats. 1656

Soil fumigant determination: Extraction and determination of ethylene dibromide in soils. 1836

SOIL FUNGI
A method of evaluating fungicides in the soil under controlled conditions. 944

Determination of soil fungi antagonistic to Fusarium roseum. 1044

Effect of growing crops and crop residues on soil fungi and seedling blights. 1045

The effect of nutrition on germination of conidia of Helminthosporium sativum in natural soil. 1727

Saprophytic activity and survival of Rhizoctonia in soil as affected by some ecological factors. 1783

SOIL INDEXING
Soil indexing for pea root rot and the effect of root rot on yield. 943

SOIL INSECTICIDES
Influence of soil type on the activity of insecticides in soil. 1413

Evaluation of soil insecticide treatments for control of cyclodiene-resistant southern corn rootworms. 1555

SOIL MICROORGANISMS
Occurrence of Pseudomonas solanacearum in virgin soils in costa rica. 980

Greenhouse pathogenicity trials with nematode-infested soil. 1296

SOIL MOISTURE
Influence of moisture on winter survival of the pink bollworm. 69

Changes in weight of abraded and unabraded larval pink bollworm under submersion and desiccation. 333

Effects of soil moisture on survival of prepupae of the alkali bee. 632

Occurrence of Verticillium wilt on peanuts. 998

Method of chlamydospore germination of Isphacelotheca reiliana in soil. 172I

SOIL SAMPLING
Effect of storage temperatures on survival of plant parasitic nematodes in soil. 1291

A power tool for sampling soil for insects. 1909

SOIL SERIES
Influence of soil type on the activity of insecticides in soil. 1413

SOIL STERILIZATION
A note on the effects of some soil sterilants on the mineralisation and nitrification of soil-nitrogen. I410

SOIL TEMPERATURE
The effect of air and ground surface temperature on boll weevil winter survival. 615

Influence of soil temperature on seedling blight of smooth bromegrass. 1014

Effect of soil temperature on pathogenesis of Thielaviopsis basicola on sweet orange roots. 1020

Growth of apple seedlings in relation to soil temperature and inoculation with Pratylenchus penetrans. 1303

The effect of soil temperatures on development of Heterodera glycines in soybeans. I3II

SOIL TREATMENT
Effect of soil applications of nematocides on emergence of periodical cicada. 1407

Aerated steam for soil treatment. 1B74

SOIL-BORNE PLANT DISEASES
Effect of soil fungicides upon soil-borne plant pathogenic bacteria and soil nitrogen. 906

Germination of oospores of Aphanomyces euteiches embedded in plant debris. 970

SOILS
Emergence and flight of click beetles (Coleoptera: Elateridae) in organic soils of southwestern Quebec. 122

Effectiveness of insecticides in soil against termites after 15 years. 43B

Effect of soil fungicides upon soil-borne plant pathogenic bacteria and soil nitrogen. 906

A method of evaluating fungicides in the soil under controlled conditions. 944

Alteration of the incidence of Botrytis cinerea on tomato by liming the soil. 1001

Soil inhibits infection with tobacco necrosis virus. 1050

Comparison of soil surface treatments of some fumigants and soil insecticides for apple maggot control. 1179

Herbicide residues: A colorimetric method for the determination of EPTC residues in crops and soils. 1430

Vertical distribution and persistence of insecticidal residues in soils as influenced by mode of application and a cover crop. 1492

Health status of sisal plants (Agave sisiana) as related to soils and the mineral composition of their leaves. 177B

SOLANUM ELAEGNIFOLIUM
White horsenettle or silverleaf nightshade, an important host of lygus bugs. 242

SOLENOPSIS SAEVISSIMA RICHTERI
Laboratory evaluation of certain chlorinated hydrocarbon insecticides against the imported fire ant. 280

On the biology of the imported fire ant. 408

The effect of heptachlor and chlordane on the foraging activity of imported fire ants. 49B

Imported fire ant toxic bait studies: GC-12B3, a promising toxicant. 1639

SOLIDAGO
Insects and spiders from goldenrod galls of Gnorimoschema gallaesolidaginis Riley (Gelechiidae). 106

SOLOMON ISLANDS
A new species of Acropsilus from the Solomon Islands (Diptera: Dolichopodidae). 200

SOLOPATHOGENICITY
A solopathogenic line of Tilletia caries. B51

SOLUBILITY
Insecticide solubility: Solubility of carbon-14 DDT in water. 1817

SOLUBILIZATION
The fractionation and solubilization of Prodenia eridania chitin synthetase. 4B0

SOLVENTS
Effect of water solubility and soil moisture upon plant uptake of granulated systemic insecticides. 121B

Determination of mercury in mecurial and organomercurial pesticides. 1B6B

SORGHUM
Notes on the genus Heterococcus Ferris (Coccoidea, Homoptera) with a description of a new species injurious to. 75

Races of head smut of sorghum. 724

Insecticidal field screening tests against the fall armyworm in sorghum and corn. 1130

Field insecticide screening tests against the corn flea beetle. 1131

Growth and yield of grain sorghum infested in the whorl with fall armyworm. 1132

A simple technique for recovering insects from sorghum heads in insecticide tests. 1160

Effectiveness of insecticides against the sorghum webworm in sorghum heads. 1613

Effectiveness of insecticides against the corn leaf aphid in sorghum whorls. 1614

SOUND WAVES
Inhibition of reproduction of Indian meal-moths, Plodia interpunctella, by exposure to amplified sound. 473

SOUR CHERRIES
Bionomics of the destructive prune worm, Mineola scitulella, on sour cherry in Wisconsin. 163

Additional studies on the bionomics of the eye-spotted bud moth, Spilonota ocellana, on sour cherry in Wisconsin. 166

Serological differentiation of prune dwarf and sour cherry necrotic ringspot viruses. 809

Walkingsticks: an unusual pest on sour cherry. 1197

SOUTH AMERICA
Five new species of the caddisfly Polycentropus from South America (Trichoptera: Polycentropodidae). 260

SOUTH CAROLINA
Winter mortality of boll weevils in cotton bolls in South Carolina. 526

SOUTHERN CALIFORNIA
Studies with whitefly parasites of Southern California. I. Encarsia pegandiella Howard (Hymenoptera: Aphelinidae). 393

SOUTHERN COWPEA WEEVIL
Laboratory evaluation of several chemical protectants against the southern cowpea weevil, Callosobruchus chinensis, on stored dried beans in Korea. 1379

SOUTHERN FIRE ANTS
An unusual record of the southern fire ant, Solenopsis xyloni, in North Carolina. 257

SOUTHERN POTATO WIREWORM
Insecticide resistance tests for the southern potato wireworm. 6B8

Control of the southern potato wireworm, Canoderus falli, on early-crop potatoes. 1094

SOYBEANS
Alfalfa mosaic virus in soybean. 726

Frozen-lima-bean agar for culture and storage of Phytophthora sojae. 762

Japanese beetle damage to soybeans and corn. 1121

Variation in susceptibility of soybean pubescent types, broad bean, and runner bean varieties and plant introductions to the potato leafhopper. 1271

Evaluation of crops rotation and soil fumigation for controlling the soybean cyst nematode. 1289

The effect of soil temperatures on development of Heterodera glycines in soybeans. 1311

Dimethoate residues on soybean, corn, and grass forage. 1431

Translocation of DDT and heptachlor in soybeans. 1453

SPACE BIOLOGY

Growth retardants and plant vigor:Increasing tolerance of soybean plants to some soiubie saits through appiication of plant growth-retardant chemicais. 1769

Herbicide uptake and distribution: Synthesis of carbon -14-iabeied daiapon and trial appiications to soybean and corn plants. 1816

SPACE BIOLOGY
Monitoring electrophysiologicai responses of cockroaches for space research. 638

SPEAR
A spear for sampling bulk grain by suction. 1882

SPECTROMETRY
Appiication of direct photometry to agriculturai anaiysis. 1967

SPECTROPHOTOMETRY
Colorimetric method for the determination of ethion of residues. 1466

The spectrophotofiuorometric determination of O,O-diethyl O-2-pyrazinyi phosphorothioate (Zinophos) and its oxygen analog in soil and plant tissues. 1484

Insectide residues: Residue analysis of a chlorinated insecticide (Thiodan) by combination of gas chromatography and infrared spectrophotometry. 1538

Insecticide measurement: Determination of toxaphene by a spectrophotometric diphenylamine procedure. 1833

SPECTROSCOPY
Spectral response characteristics of the boll weevil. 442

Identification of halogenated pesticides by mass spectroscopy. 1504

Plant tissue analysis: X-ray fluorescence determination of zinc in plant tissues. 1801

SPERMATOPHYTA
A cage to contain smaii insects during poiiination studies. 589

SPERMATOZOA
Some effects of gamma radiation on fertility of Drosophila meianogaster and viability of sperm after multiple matings of males. 436

SPHACELOTHECA REILIANA
Method of chlamydospore germination of isphacelotheca reiliana in soil. 1721

SPHERICAL VIRUSES
Morphological differentiation of spherical viruses by electron microscopy. 1004

SPIDERS
Insects and spiders from goidenrod galls of Gnorimoschema galiaesoiidaginis Riley (Gelechiidae). 106

Spiders on apple in Wisconsin and their abundance in a natural and two artificial enviroments. 125

Action of Latrodectus mactans tredecimguttatus venom and fractions on celis cultivated in vitro. 1705

SPILONOTA OCELLANA
Pupation sites of the eye-spotted bud moth, Spilonota ocellana and differences in degree of development on two apple varieties in Wisconsin. 124

Additionai studies on the bionomics of the eye-spotted bud moth, Spilonota ocellana, on sour cherry in Wisconsin. 166

Change in sex ratio of the eye-spotted bud moth, Spilonota ocellana, over its adult emergence period. 489

The influence of a virus disease and parasites on Spilonota ocellana in apple orchards. 1144

Natural biotic control factors of the eye-spotted bud moth, Spilonota ocellana on apple in Wisconsin. 1162

SPINACH
Radish yeliows, a disease of radish, sugar beet and other crops. 793

A new source of resistance to spinach biight. 1036

SPISSISTILUS FESTINUS
Life-history studies and rearing techniques for the three-cornered aifaifa hopper. 150

SPODOPTERA EXIGUA
Development of the beet armyworm and its parasite Chelonus texanus in relation to temperature. 321

Migration of beet armyworm iarvae. 672

SPODOPTERA FRUGIPERDA
Control of a corn stem weevil (Hyperodes humilis), and fali armyworm with DDT and parathion in South Fiorida. 423

Insecticidai field screening tests against the fail armyworm in sorghum and corn. 1130

Growth and yield of grain sorghum infested in the whorl with fall armyworm. 1132

Detecting corn seedling differences in the greenhouse by visual classification of damage by the fali armyworm. 1266

SPORANGIA
Some factors affecting sporangium formation of Phytophthora cryptogea. 1753

SPORE GERMINATION
The effect of mineral nutrition on spore germination and growth responses in Aspergillus niger and some other fungi. 1771

SPORE MOISTURE
Relations of spore moisture to spore shape and germination reaction to temperature. 1782

SPORE SHAPE
Relations of spore moisture to spore shape and germination reaction to temperature. 1782

SPORES
A serological comparison of the parasporal bodies of three insect pathogens. 482

Protein synthesis by nongerminated fungal spores including uredospores of the bean rust fungus. 1002

Bioassay of a microbial insecticide containing spores of Bacillus thuringiensis Berliner. 1849

SPORIDIA
The effect of environment on germination of sporidia in Cronartium ribicoia. 740

SPOROPLASM
Observations on the emergence of the microsporidian sporoplasm. 1755

SPOTTED ROOT MAGGOT
The mechanism of DDT resistance in the spotted root maggot Euxesta notata. 443

SPRAY ATOMIZATION
A rapid method of estimating the atomization of oil-base aerial sprays. 1942

Precision of atomization estimates for aerial sprays. 1951

SPRAY PRESSURE
Effect of spray volume and pressure on the control of larvae of the alfalfa weevil, Hypera postica, with conventional spray equipment. 630

SPRAY TECHNIQUE
A precision spray technique for evaluating oils for Sigatoka disease control on individual banana leaves in the field. 1890

SPRAY VOLUME
Effect of spray volume and pressure on the control of larvae of the alfalfa weevil, Hypera postica, with conventional spray equipment. 630

SPRAYING
Experimental field techniques used to evaluate gypsy moth, porthetria dispar, control in new york. 339

Effect of repeated sprays on susceptibility of California red scale to parathion. 342

Alfalfa weevil control studies in West Virginia. 365

A spray technique for implanting boll weevil eggs on artificial diets. 389

Hydrogenation refining vs. efficiencies of spray oils against citrus red mite eggs and California red scale. 587

The influence of stickers on the effectiveness of sprays of Bacillus thuringiensis var. thuringiensis Berliner and Bacillus entomocidus var. entomocidus Heimpel and Angus. 844

The influence of spray programs on the fauna of apple orchards in Nova Scotia. XI. effects of low dosages of DDT on predator populations. 1168

Peach tree borer experiments in peach orchards. 1240

Low-volume concentrate sprays applied by aircraft for control of the cereal leaf beetle. 1267

Effect of delayed spraying on cankerworm control. 1316

Oil-based and water-based ciodrin sprays for fly control on dairy cattle. 1330

Preventive spraying schedules for dairy farm fly control. 1335

Control of cattle grubs by pour-on, injection, and spray. 1351

Control of ticks on cattle with toxaphene applied by power sprayer and spray race. 1369

Residual sprays for the control of house flies in field tests. 1439

Residues of OO-dimethyl S-(N-methylcarbamoylmethyl) phosphorothiolothionate (Dimethoate) in sprayed crops. 1445

Insecticide residues: Meat and milk residues from livestock sprays. 1447

Residues of Sevin in whole milk from sprayed and dusted cows. 1455

DDT residues on sweet corn ear tips and silks after treatment with dust, spray, or granular formulations. 1475

Experimental insecticides applied as sprays to control thrips and the cotton fleahopper. 1584

Spray deposit on oil-sensitive cards and spruce budworm mortality. 1641

Toxicity of PCNB to Magnolia fuscata. 1720

Responses of grapefruit trees to various spray oil fractions. 1735

A vehicle-mountable rotary-tube sprayer. 1875

A rotary disc device for applying ultra-low-volume (undiluted) pesticides with ground equipment. 1883

New spray reagents for the detection of thiophosphate insecticides on paper chromatograms. 1902

A modified high-clearance sprayer for plot use. 1922

SPRAYING EQUIPMENT
Effect of spray volume and pressure on the control of larvae of the alfalfa weevil, Hypera postica, with conventional spray equipment. 630

Control of cattle grubs with coumaphos applied by sprayer and spray-dip machine. 1339

Use of step-on switches for control of automatic sprayers. 1879

Portable sprayer for aerial ULV applications. 1900

Ground equipment for applying low-volume insecticides to sweet corn. 1920

A modified high-clearance sprayer for plot use. 1922

A dispensing pump for viscous formulations of lure. 1923

A laboratory insecticide sprayer designed to simulate field spraying equipment. 1948

Design and performance of a laboratory air-blast sprayer. 1968

SPREAD
Spread of boll weevil and its control in far west Texas. 197

SPRING DEAD SPOT (BERMUDAGRASS)
Spring dead spot of bermudagrass. 1031

SPY 227
Spy 227, a sensitive indicator for apple viruses. 893

SR90
Biological effects of SR90 in miniature swine. 1572

STALK ROT (CORN)
Nature of resistance to Diplodia stalk rot of corn. 928

STARVATION
Starvation method for obtaining diapausing boll weevils able to survive the winter in hibernation. 657

Storage and excretion of DDT in starved rats. 1582

STATIC ELECTRICITY
An effect of static electricity on captures in insect traps. 1946

STATISTICAL ANALYSIS
Sequential sampling for the imported cabbageworm, Pieris rapae (L.). 79

STEAM
Aerated steam for soil treatment. 1874

STELLARIA MEDIA
The pseudo-curly top disease in south Florida. 992

STEM PITTING (CITRUS)
Stem pitting problem in a Pera sweet orange fertilization experiment. 950

Stem pitting and decline of Pera sweet oranges in the state of Sao Paulo. 960

Occurrence of stem pitting in citrus types in Brazil. 963

STEM PITTING VIRUS
Bark patch grafts as a means of indexing for the stem-pitting virus. 884

STEM ROT (DRACAENA SANDERIANA)
Stem rot of Dracaena sanderiana. 911

STEM ROT (LUPINES)
Phytophthora root and stem rot of lupines. 845

STEM RUST (OATS)
Induced susceptibility of wheat and barley to oat crown and stem rust fungi. 753

Inheritance of stem rust resistance of C.I.7232, a derived tetraploid oat. 958

Altering the effect of oat rust resistant genes by certain physical means. 1729

STEM RUST (WHEAT)
Half-life of effectiveness against stem rust of systemic chemicals in wheat seedlings. 727

Some metabolic changes in wheat due to stem rust infection and different temperatures. 812

STEM WEEVIL

Variability in stem rust reactions of Kubanka wheat with light intensity and temperature. 892

The development of stem rust on wheat leaves treated with some sugars and sugar alcohols. 990

A toxin extracted from Marquis wheat infected by race 38 of the stem rust fungus. 991

STEM WEEVIL
Parasites of two weevils, Microlarinus lareynii and M. lypriformis, that feed on the puncture vine, Tribulus terrestris L. 269

STEMPHYLIUM
Pathogenicity and morphology of some leguminicolous and related species of Stemphylium. 818

STENEOTARSONEMUS PALLIDUS
Seasonal densities and control of the cyclamen mite, Steneotarsonemus pallidus (Acarina: Tarsonemidae) on strawberry in New York. 204

STERILE MALES
Results of cage experiments with sterile male releases and a chemosterilant technique for control of cabbage looper populations. 1623

STERILE ROOT CULTURE
Parathion studies on bean grown in sterile root culture. 1719

STERILITY
Quantitative effects of tepa, metepa, and apholate on sterilization of male house flies. 328

Melon fly eradication by overflooding with sterile flies. 625

STERILIZATION
Sterilization of the male alfalfa weevil (Hypera postica: Curculionidae) by x-radiation. 315

A comparison of the amounts of metepa required to sterilize the screw-worm fly and the stable fly. 326

The induction of sexual sterility in the screw-worm fly by antimetabolites and alkylating agents. 346

Sterilization of pink bollworm adults with metepa. 369

Sterilization of onion maggots by irradiation with cesium-137. 517

Surface sterilization of eggs of the boll weevil with cupric sulfate. 549

Sterilization of the cabbage maggot with apholate. 640

Studies on eradication of Anopheles pharoensis by the sterile-male technique using cobalt. II. Induced dominant lethals in the immature stages. 644

Exploratory studies on gamma radiation for the sterilization of the boll weevil. 697

Sterilization of agar media with propylene oxide. 1840

STERILIZATION (INSECTS)
Quaternary ammonium compounds for the surface sterilization of insects. 513

STEROLS
A comparison of the sterols in resistant and susceptible house flies, Musca domestica. 374

STICKERS
The influence of stickers on the effectiveness of sprays of Bacillus thuringiensis var. thuringiensis Berliner and Bacillus entomocidus var. entomocidus Heimpel and Angus. 844

STIMULANTS
Stimulatory effects of chlordane on hepatic microsomal drug metabolism in the rat. 1610

STIMULI
Quantitation of effect of several stimuli on the approach of Aedes aegypti. 116

Quantitation of effect of several stimuli on landing and probing by Aedes aegypti. 466

STINKING SMUT (WHEAT)
Wheat bunt development in relation to postinfection environment. 941

STOLON ROT (LADINO CLOVER)
Heat-induced stolon rot of ladino white clover in the greenhouse. 855

STOMOXYS CALCITRANS
A comparison of the amounts of metepa required to sterilize the screw-worm fly and the stable fly. 326

Chemical induction of sterility in the stable fly. 425

Mating habits of the stable fly. 426

Laboratory tests to determine susceptibility of adult horn fly and stable fly to insecticides. 427

Mating and oviposition studies of the stable fly. 470

Use of WHO tsetse fly kit for determining resistance in the stable fly. 536

Evaluation of insecticides in the laboratory against adult and larval stable flies. 1655

STORAGE
A study of the khapra beetle, Trogoderma granarium, in commercial grain storages in southern Arizona. 161

The effect of storage on the virulence of a polyhedrosis virus. 547

Frozen-lima-bean agar for culture and storage of Phytophthora sojae. 762

Superficial scald, a functional disorder of stored apples. II. Promoters and inhibitors. 838

Effect of storage temperatures on survival of plant parasitic nematodes in soil. 1291

Cooling bulk grain in the British climate to control storage insects and to improve keeping quality. 1372

Relationships of insects to hot spots in stored wheat. 1385

The mycoflora of peanuts in storage. 1403

Metabolism, storage, and excretion of C14-endosulfan in the mouse. 1586

STORAGE DISEASES
Observations on pustular spot on peaches. 1378

STORAGE INJURIES
Deterioration of stored feedstuffs: Relation of interspace relative humidity to growth of molds and heating of feed ingredients and feed mixtures. 1377

STORED PRODUCT INSECTS
Insect and mite infestation in empty granaries in the prairie provinces. 1391

The use of Fluon to prevent the escape of stored-product insects from glass containers. 1960

STORED PRODUCTS
The effects of confining confused flour beetles in gelatin capsules before, during, and after gamma irradiation. 651

Influence of fumigation and age on carbon dioxide production of some stored-product insects. 662

Influence of various factors on the deterioration of stored corn by fungi. 1375

Deterioration of stored feedstuffs: Relation of interspace relative humidity to growth of molds and heating of feed ingredients and feed mixtures. 1377

Exploratory tests with bromodan as a protectant for wheat against stored-product insects. 1388

Control of the tobacco moth with dichlorvos. 1395

Fumigation efficiency as affected by exposures, formulations and by insect species and stages. 1474

The fumigant toxicity of two new chemicals to stored-product insects. 1697

STORED PRODUCTS CONTAMINATION
The migration of piperonyl butoxide from treated multiwall kraft bags into four commodities. 1477

STORED-PRODUCT INSECTS
Insects found in Ohio grain elevators and feed mills. 1399

Insecticidal properties of sevin against some stored-grain insects. 1592

STORED-PRODUCT MITES
Feeding and reproduction of some stored-product mites on seed-borne fungi. 611

STORED-PRODUCTS INSECT RESEARCH
An outline of recent progress in stored-products entomology. 1397

STRAWBERRIES
The life history and control of Nemocestes incomptus (Horn), a native root weevil attacking strawberries in western Washington. 52

Potential of biological control of two-spotted spider mites on strawberries in California. 100

Seasonal densities and control of the cyclamen mite, Steneotarsonemus pallidus (Acarina: Tarsonemidae) on strawberry in New York. 204

Differential transmission of four strains of strawberry vein banding virus by four aphid vectors. 805

A genetic abnormality in an Idaho clone of fragaria vesca. 830

Angular leafspot, a new disease of strawberry. 853

Influence of fungicides on microorganisms associated with apparently healthy strawberries. 1026

The relationship of lygus bugs and thrips to fruit deformity in strawberries. 1062

The yellow rose aphid, Rhodobium porosum (Sanderson) (Homoptera: Aphididae), on strawberry. 1172

The reduction of insect-caused apical seediness in strawberries. 1226

Control tests against the two-spotted spider mite, Tetranychus telarius (L.), on strawberries. 1227

Duration of control of the strawberry aphid by several chemicals. 1234

Chemical control of slugs affecting vegetables and strawberries in thePacific Northwest. 1297

Chemical evaluation of pesticide residues on strawberries. 1458

The effect of some fungicides on the flavor of canned strawberries. 1621

STREAK (PEAS)
An unusual virus isolated from Pisum sativum affected by streak. 978

STREAMS
Local distribution of released laboratory-reared screw-worm flies in relation to water sources. 90

STREPTOCOCCUS PLUTON (WHITE)
The epizootiology of European foulbrood of the larval honey bee, Apis mellifera Linnaeus. 275

STREPTOMYCES
Effects of Streptomyces and Trichoderma on Fusarium. 770

STREPTOMYCES GRISEUS
The partial purification and biological activity of an antifungal antibiotic produced by a strain of Streptomyces griseus. 1018

STRIATE MOSAIC (WHEAT)
The painted leafhooper, Endria inimica (Say), a vector of wheat striate mosaic virus in Manitoba. 673

STRIDULATION
Orientation of the males of Aedes aegypti (L.) (Diptera: Culicidae) to sound. 681

A machine for changing the positions of a pair of directional light traps to eliminate positional effects. 1953

STRIGA ASIATICA
Studies on the penetration and nutrition of Striga asiatica. 951

STRIPE MOSAIC (BARLEY)
Effects of salts, detergent, and a barley-juice factor on stability of barley stripe mosaic virus. 750

STRONTIUM ISOTOPES
Dietary considerations of the radionuclide contamination of nonmilk foods. 1706

Availability of exchangeable and non-exchangeable strontium-90 to plants. 1790

STRONTIUM-90
Determination of strontium-90 in milk by an ion exchange method. 1512

STUBBLE SPRAYS
Control of the alfalfa weevil, Hypera postica, in N.Y. 1064

STUNT (APRICOTS)
A virus-caused stunt of apricot and its relationship to certain other stonefruit virus diseases. 1032

STUNT (BLUEBERRIES)
Wild sources of blueberry stunt virus in New Jersey. 840

STUNT (PEACHES)
Observations on the natural spread of the so-called peach stunt virus in a California peach orchard. 1033

STYLETS
Note on the movements of the mandibular and maxillary stylets of the aphid, Myzus persicae (Sulzer). 13

SUBTERRANEAN
Morphology and host range of a subterranean member of the Meliolaceae. 816

SUCKING INSECTS
A survey of the sucking insects of the birches in the Maritime Provinces. 232

SUCTION TRAPS
A spear for sampling bulk grain by suction. 1882

SUGAR
Effect of copper and glyodin fungicides on amino acid and sugar content and oxygen use of Colletotrichum capsici. 1793

SUGAR BEETS
The influence of fertilizers on sugar beets which received insecticide-fungicide seed treatments. 1230

Studies on uptake and translocation of C14-labeled p-dimethylaminobenzenediazo sodium sulfonate (Dexon) by sugar beet seedlings. 1747

SUGAR CANE
Adsorption of several pre-emergence herbicides by Hawaiian sugar cane soils. 1414

SUGARBEETS
Radish yellows, a disease of radish, sugar beet and other crops. 793

Phorate and demeton for control of the pea leaf miner on sugarbeets. 1383

SUGARCANE

SUGARCANE
Studies on the Phytophthora rot of sugarcane seed pieces in Louisiana. 723

Virus-like particles associated with the ratoon stunting disease of sugarcane. 803

Critical period for controlling the sugarcane borer in sugarcane in Louisiana. 1167

SUGARS
The development of stem rust on wheat leaves treated with some sugars and sugar alcohols. 990

SULFAQUINOXALINE
Control of northern fowl mites, Ornithonyssus sylvarium, with sulfaquinoxaline. 1343

SULFONAMIDES
A colorimetric proccdure for the microdetermination of sulfonamides in animal tissues. 1502

SULFONIC ACIDS
Toxicologic studies with branched and linear alkyl benzene sulfonates in rats. 1662

SULFUR COMPOUNDS
Chemical studies on the herring (Clupea harengus). XI Preliminary gas-chromatographic study of volatile sulphur compounds produced during the cooking of herring. 1479

SULFUR ISOTOPES
Herbicide uptake from soils: Uptake of radioactive ethyl-N,N-)DI-N-PROPYLTHIO carbamate (EPTC-S35) and translocation of sulfur-35 in various crops. 1409

SULFUR-35
Herbicide uptake from soils: Uptake of radioactive ethyl-N,N-)DI-N-PROPYLTHIO carbamate (EPTC-S35) and translocation of sulfur-35 in various crops. 1409

SULFURYL FLUORIDE
Methyl bbromide, sulfuryl fluoride, and other fumigants against quarantinable Cochlicella and Theba snails. 1678

The fate of sulfuryl fluoride in wheat flour. 1847

SULPHUR
Sulphur nutrition of Aphanomyces euteiches. 1743

SURFACE-ACTIVE AGENTS
Oils and surfactants alone, and insecticide-oil combinations for aphid control on turnips and cabbage. 1714

SUSCEPTIBILITY
Mass rearing of the cabbage maggot under controlled environmental conditions, with observations on the biology of Cyclodiene-susceptibie and resisting strains. 424

SWARM FORMATION
Swarming, mating, and density of Anopheles stephensi mysorensis. 573

SWARMING
Mechanism of swarming in Tylenchorhynchus species (Nematoda, Tylenchida). 1295

SWEET CORN
Evaluation of Shell SD-8447 for control of two sweet corn insects. 1716

SWEET LIME
Viruses in sweet lime rootstock in Bella Vista, Corrientes. 949

SWEET ORANGE
Effect of soil temperature on pathogenesis of Thielaviopsis basicola on sweet orange roots. 1020

SWEETCLOVER
Non-preference as a mechanism of sweetclover and alfalfa resistance to the sweetclover aphid and the spotted alfalfa aphid. 476

Plowing for sweetclover weevil control. 1175

Damage to sweetclover varieties by potato leafhopper. 1176

SWEETCORN
A sequential sampling plan for determining the status of corn earworm control in sweet corn. 684

Further field experiments on the use of Bacillus thuringiensis and chemical insecticides for the control of the european corn borer, Ostrinia nubilalis, on sweet corn in southwestern quebec. 1139

Northern corn rootworm resistance in sweet corn. 1259

DDT residues on sweet corn ear tips and silks after treatment with dust, spray, or granular formulations. 1475

Ground equipment for applying low-volume insecticides to sweet corn. 1920

SWEETCORN SILK
Parasitization of corn earworm eggs on sweet corn silk in Southern California, with notes on larval infestations and predators. 1198

SWEETPOTATO FEATHERY MOTTLE
The feathery mottle virus complex of sweetpotato. 834

SWEETPOTATOES
Identifying two sweet potato viruses with paper chromatography. 867

Virus diseases of sweet potatoes in Israel. 868

Analysis for internal cork virus (ICV) in serial nodes of sweet potato stems. 881

Four little-known pests of sweetpotato roots. 1091

Biology of the banded cucumber beetle, Diabrotica balteata, in Louisiana. 1205

SWINE
Biological effects of SR90 in miniature swine. 1572

Toxic effects of hexachloronaphthalene on swine. 1624

Toxicology of wood preservatives to swine. 1685

SYMBIOSIS
Hyperparasitism, a mutualistic phenomenon. 59

Effects of protozoan parasites and commensals on larvae of the mosquito Aedes communis (DeGeer) (Diptera: culicidae) at Churchill, Manitoba. 669

SYMPOSIA
Symposium on metabolism of herbicides. 1828

SYMPTOMATOLOGY
Concentration of DDT in brain and other tissues in relation to symptomatology. 1611

SYNANTHEDON PICTIPES
Effectiveness of insecticides for control of the lesser peach tree borer. 1554

SYSTEMIC FUNGICIDES
Systemic fungicides. 1822

SYSTEMIC INSECTICIDE
Heptachlor as a systemic insecticide against the wheat stem sawfly, Cephus cinctus Nort. 1135

SYSTEMIC INSECTICIDES
Bark penetration and uptake of systemic insecticides from several treatment formulations in white pines. 1088

Control of several cotton pests with systemic insecticides. 1093

Small-scale field tests in Texas with six systemic insecticides for the control of cattle grubs. 1104

Systemic insecticides for the control of western flower thrips on bulb onions. 1123

Granulated systemic insecticides for vegetable insect control in south texas. 1126

Incidence of aster yellows in lettuce as affected by placement of systemic insecticides. 1217

Tests of systemics for control of birch leaf miner. 1229

Application of systemic insecticides as seed treatment to protect wheat plants against grasshoppers and wheat stem sawfly. 1238

Tests with systemic insecticides in rabbits as toxicants for body lice. 1331

Cattle grub control by the addition of a systemic insecticide to drinking water. 1336

Systemic insecticides to control greenbugs on spring planted barley. 1382

Field tests with low-level feeding of ronnel for control of cattle grubs and horn flies. 1394

Effect of formulation on toxicity to plants and insects of some systemic insecticidal seed dressings. 1546

Laboratory and greenhouse experiments with a new series of systemic insecticides. 1560

A host-parasite system for testing systemic insecticides. 1574

Further evaluation of animal systemic insecticides, 1962. 1591

Control of thrips and aphids on carnations with systemic insecticides. 1627

The effect of various adjuvants on the systemic insecticidal activity of phorate and Zectran. 1642

Simple screening test for systemic aphicides. 1652

Systemic insecticides for control of Lygus hesperus Knight on cotton. 1679

Preliminary observations concerning the use of systemic insecticides in large trees for control of the European elm scale. 1708

The influence of two systemic organophosphates on growth, fruiting, and yield of cotton in California. 1758

Factors influencing the systemic insecticidal action of substituted phenyl dimethyl phosphates. 1850

TABANIDAE
The effect of horse fly control on rate of infection of bovine anaplasmosis under field conditions in Louisiana. 1365

TABASCO PEPPER
Pathological histology of Tabasco pepper plants infected with tobacco etch virus. 1039

TAGETES
A Fusarium wilt of Tagetes.
olsen, carl m. 722

TAIWAN
Meloidogyne from Taiwan and New Delhi. 1283

TARPAULINS
Studies of phosphine as a fumigant for sacked rice under gas-tight tarpaulins. 1381

TASTE TESTING
Pesticides and food flavor:Studies in taste panel methodology. 1488

TAXONOMY
Host range, pathogenicity, and taxonomy of Ascochyta imperfecta. 796

TEA
The control of yellow tea mite, Hemitarsonemus latus (Banks), with DDT on cotton in Uganda. 1141

The growing and manuring of tea. 1731

TEFLON
Teflon as a barrier to insects. 1903

TELENOMUS ALSOPHILAE VIERECK
Observations on the life history of Telenomus alsophilae, an egg parasite of the elm spanworm, Ennomos subsignarius. 30

TELIOSPORES
Differential longevity of teliospores of pathogenic races of Tilletia and T. foetida. 1752

TELODRIN
Resistance to Telodrin in the German cockroach, Blattella germanica. 337

Thiodan and Telodrin residues on tobacco. 1470

Residues of heptachlor epoxide and telodrin in milk from cows fed at part per billion insecticide levels. 1473

TEMPERATURE
Laboratory and field investigations of the effect of temperature on the development of Neodiprion sertifer (Geoff.) in the cocoon. 237

The stabilization of relative humidity with honey in closed systems. 287

The effect of temperature on the consumption of fat during pupal development in Glossina. 319

A comparison of the number of tropical rat mites and tropical fowl mites that fed at different temperatures. 344

Observations on the role of light, temperature, age, and sex in the response of screw-worm flies to attractants. 347

Corn earworm development in relation to temperature. 510

The effect of temperature fecundity and longevity of the black blow fly, Phormia regina. 558

Effect of temperature and host plants on progeny production of four biotypes of corn leaf aphid, Rhopalosiphum maidis. 610

Effects of temperature on hatching and on longevity on starved first-instar larvae of Hylemya brassicae (Bouche) (Diptera: Anthomyiidae). 639

The effects of temperature and moisture on development of black stem of alfalfa. 738

Some metabolic changes in wheat due to stem rust infection and different temperatures. 812

The effect of temperature on some entomophthoraceous fungi. 826

The effects of temperature and moisture on oak wilt development. 837

Variability in stem rust reactions of Kubanka wheat with light intensity and temperature. 892

Effects of postinoculation temperatures on rate of bean rust symptom development. 972

A high-temperature-induced local necrosis associated with the bean rust disease. 973

Effects of temperature and moisture stress on the lettuce powdery mildew fungus. 975

Severity, prevalence, and ecology of cotton boll rots as related to temperature. 976

Temperature effecting a reversal of dominance in the resistance of Pisum sativum to bean virus 2. 977

Some effects of temperature on the transmission of cabbage mosaic virus by Myzus persicae. 1008

Effect of storage temperatures on survival of plant parasitic nematodes in soil. 1291

The effect of hot water at different temperatures on larvae of various species of Meloidogyne. 1317

Biochemical changes associated with the development of low-temperature breakdown in apples. 1373

TEPA

Effect of temperature on post-harvest decay of blueberry varieties. 1376

Effects of temperature, reduced pressure, and moisture content on sorption and retention of ethylene dibromide by wheat and corn. 1398

Temperature effects on toxicity of synergized carbamate insecticides on house flies. 1593

Effect of pre- and post-treatment temperatures, age of deposit, and repellency on the toxicity of Kelthane to the two-spotted mite, Tetranychus telarius (L.) (Acarina: Tetranychidae). 1596

Effects of certain temperatures and seed treatments on emergence and terminal breakdown of cotton seedlings. 1802

TEPA

Quantitative effects of tepa, metepa, and apholate on sterilization of male house flies. 328

Effects of tepa on reproduction of codling moths. 429

Egg viability and longevity of japanese beetles treated with tepa, apholate, and metepa. 485

Effects of tepa on the reproductive organs and embryogeny of the german cockroach. 617

Tepa for sterilizing male carpenterworms. 622

Susceptibility of mature and newly emerged face flies to chemosterilization with apholate. 700

Determination of tepa residues on chemosterilized Mexican fruit flies. 1444

Structure-activity relationships in analogs of tepa and hempa. 1568

Evaluation of apholate and tepa as chemosterilants for the fall armyworm. 1715

TEPHRITIDAE

Differential effect of gamma radiation on fruit flies and fruit fly parasites. 277

Two varieties of Sesbania grandiflora as fruit fly hosts. 1193

TERMITES

Effectiveness of insecticides in soil against termites after 15 years. 438

Drywood termite metabolism of Vikane fumigant as shown by labeled pool technique. 1848

TERRITORIALITY

A description of territorial behavior and a quantitative study of its function in males of Hetaerina americana (Fabricius) (Odonata: Agrilidae). 454

TEST TUBE CLOSURES

An improved tube closure for biological tests. 1940

TETANOPS MYOPAEFORMIS

Reliability of trapping in determining the emergence period and sex ratio of the sugar-beet root maggot Tetanops myopaeformis (Roder) (Diptera:Otitidae). 83

TETRADIFON

Comparison of tetradifon emulsifiable concentrate and wettable powder formulations against the two-spotted spider mite. 495

TETRANYCHIDAE

Population dynamics of spider mites influenced by DDT. . 8

Effects of spider mite infestations on dent corn in California. 1065

TETRANYCHUS URTICAE

A comparison of two sampling methods for estimating population trends of thrips and mites on potatoes. 179

Competition between two species of mites. I. Experimental results. 382

Effect of host plant condition and fertilization on two-spotted spider mite fecundity. 435

Comparison of tetradifon emulsifiable concentrate and wettable powder formulations against the two-spotted spider mite. 495

The effects of acaricides on the developmental stages of the two-spotted spider mite, Tetranychus telarius. 509

Daily rhythm of oviposition in the two-spotted spider mite. 568

The effects of DDT and sublethal doses of dicofol on reproduction of the two-spotted spider mite. 578

Reduced fecundity of the two-spotted spider mite on metal-chelate-treated leaves. 647

The effect of plant nutriton on the fecundity of two strains of two-spotted spider mite. 701

A technique for testing acaricide residues against two-spotted spider mites on field-grown roses. 1480

Laboratory tests with Bidrin insecticide. 1578

A comparative study of toxicological test methods on a population of the two-spotted spider mite (Tetranychus telarius). 1588

Laboratory trials of six polybutene emulsions against the two-spotted spider mite. 1617

Acaricidal properties of Aramite and Kelthane against two strains of two-spotted spider mite. 1693

Resistance to the two spotted spider mite in Pelargonium. 1795

TEXAS

Spread of boll weevil and its control in far west Texas. 197

Seasonal activity of buried overwintering pink bollworm larvae in central Texas. 379

Parasitism of the leaf miner Liriomyza munda in the winter garden area of Texas. 417

Investigations of pink bollworm resistance to DDT in Mexico and the United States. 501

Small-scale field tests in Texas with six systemic insecticides for the control of cattle grubs. 1104

Seasonal light-trap collections of lepidopterous cotton insects in south Texas. 1120

Granulated systemic insecticides for vegetable insect control in south texas. 1126

The common cattle grub in cattle in southwestern Texas. 1368

THEBA PISANA (MULLER

Methyl bbromide, sulfuryl fluoride, and other fumigants against quarantinable Cochliceiia and Theba snails. 1678

THERAPEUTICS

Combination of therapeutic agents. 1456

THERIOAPHIS MACULATA

The spotted alfalfa aphid in Wisconsin. 36

Holocyclic strain of the spotted alfalfa aphid in Nebraska and adjacent states. 141

Non-preference as a mechanism of sweetclover and alfalfa resistance to the sweetclover aphid and the spotted alfalfa aphid. 476

Overwintering in the egg stage by the spotted alfalfa aphid in Nebraska. 704

Stability of resistance to pea aphid and spotted alfalfa aphid in several alfalfa clones under various temperature regimes. 1142

THERIOAPHIS RIEHMI
Non-preference as a mechanism of sweetclover and alfalfa resistance to the sweetclover aphid and the spotted alfalfa aphid. 476

THERMAL ANALYSIS
A thermal preference method of biossay of the toxicity of insecticidal films to house flies. 1979

THERMAL DEATH RANGE
Thermal death range of sclerotia of Macrophomina phaseoli. 741

THIELAVIOPSIS
Esters produced by endoconidial-forming fungi. 1733

THIELAVIOPSIS BASICOLA
The influence of pH on growth of Thielaviopsis basicola in culture and the development of Thielaviopsis root rots of poinsetta and bean in soil. 736

A technique for determining the reaction of seedling plants to Thielaviopsis basicola. 833

Pathogenicity on citrus of Thielaviopsis basicola and its isolation from field roots. I0I9

Effect of soil temperature on pathogenesis of Thielaviopsis basicola on sweet orange roots. 1020

Pathogenicity on citrus of Thielaviopsis basicola and its isolation from field roots. 1021

THINNING (FRUIT)
Residue determination of naphthaleneacetic acid in olives. 1537

THIOCYANATES
Thiocyanate scorch on grassland. 1420

THIOLS
Chemical and microbiological surveys on the effects of dithiocarbamate fungicides on wine-making. 1443

THIOPHOSPHATES
New spray reagents for the detection of thiophosphate insecticides on paper chromatograms. 1902

THIOTEPA
Mammalian and insect metabolism of the chemosterilant Thiotepa. 1666

THIRAM
Field and laboratory repellency tests with 2,2,4-trimethyl-I,3-pentanediol (TMPD). 392

Microbiological degradation of thiram. 1857

THRIPS
Field insecticide tests against several cotton pests. 563

Further studies of damage to safflower plants by thrips and lygus bugs. 1080

The relation of thrips to pansy spot on apples. 1174

Insecticide tests against thrips on cotton. 1201

Experimental insecticides applied as sprays to control thrips and the cotton fleahopper. 1584

Control of thrips and aphids on carnations with systemic insecticides. 1627

THRIPS TABACI
A comparison of two sampling methods for estimating population trends of thrips and mites on potatoes. 179

Influence of thrips on cotton yields in Alabama. 1260

Evaluation of new insecticides for control of onion thrips. 1622

THYRIDOPTERYX EPHEMERAEFORMIS
Secondary bagworm injury. 124I

Oiketicus kirbyi (Lepidoptera: Psychidae) a pest of bananas in Costa Rica. 1313

TILLETIA CARIES
A solopathogenic line of Tilletia caries. 851

Compatibility relationships between monosporidial isolates of Tilletia caries and T. contraversa. 852

Wheat bunt development in relation to postinfection environment. 941

Differential longevity of teliospores of pathogenic races of Tilletia and T. foetida. 1752

TILLETIA CONTRAVERSA
Compatibility relationships between monosporidial isolates of Tilletia caries and T. contraversa. 852

TILLETIA FOETIDA
Differential longevity of teliospores of pathogenic races of Tilletia and T. foetida. 1752

TIP BLIGHT (ONIONS)
The apothecial stage of botrytis squamosa, cause of tip and leaf blight of onions. 887

TIPHIA VERNALIS ROHWER
The status of Tiphia vernalis Rohwer, a parasite of the Japanese Beetle, in Southern New Jersey and Southeastern Pennsylvania in 1963. 484

TISSUE RESIDUES
Are animal feed additives hazardous to human health. 1440

Combination of therapeutic agents. I456

The impact on the analytical chemist of government regulations pertaining to tissue residues. I483

TISSUE TRANSPLANTS
Production of new races of Puccinia graminis var. tritici by tissue transplants. 810

TISSUES
Activation of guthion by tissue preparaions from the American cockroach. 544

A biochemical response of apple tissues to fungus infection. 733

Changes in the oxidation rates of polyphenols and ascorbic acid in tobacco stem tissues invaded by Pseudomonas solanacearum. 878

In vivo studies of tissue reaction in chicks resulting from the feeding by larvae of Trombicula splendens. 1334

Acute toxicity of Delnav and its residues in tissues of livestock. 1481

Methoxychlor in eggs and chicken tissues. 1508

Concentration of DDT in brain and other tissues in relation to symptomatology. 161I

TOBACCO
A tobacco-necrosis-like virus isolated from potato-tuber lesions and California soils. 815

Changes in the oxidation rates of polyphenols and ascorbic acid in tobacco stem tissues invaded by Pseudomonas solanacearum. 878

Influence of boron nutrition of Nicotiana tabacum on the multiplication of tobacco mosaic virus. 984

Additional evidence that sweetpotato mosaic virus is a strain of tobacco mosaic virus. 988

The pseudo-curly top disease in south Florida. 992

Population studies of Pseudomonas tabaci in diploid. triploid, and tetraploid Nicotiana tabacum plants with different doses of the Nicotiana longiflora gene for resistance. 997

Difference in the behavior of the Nicotiana longiflora wildfire resistance locus in tobacco varieties burley 21 and ky 61. 1005

Time of appearance and size of local lesions produced by two strains of tobacco mosaic virus. 1040

TOMATOES

Soil inhibits infection with tobacco necrosis virus. 1050

Seasonal distribution of Heliothis virescens and H. zea on tobacco in Kentucky. 1122

Sod webworm control on newlyset tobacco. 1211

Determination of insecticide residues on green and flue-cured tobacco and in main-stream cigarette smoke. 1437

Thiodan and Telodrin residues on tobacco. 1470

Detection of compounds that inhibit vegetative bud growth of tobacco. 1768

TOMATOES
Inactivation of TMV from tomato seed. 725

Field occurrence of tobacco mosaic virus in tomato and Chenopodium murale. 730

Cross-inoculation of tomato and corn with Gibberella. 748

Pathogenicity and taxonomy of Geotrichum candidum. 758

Mechanics of water transport in healthy and Fusarium-wilted tomato plants. 790

On the resistance of tomato varieties to Cladosporium fulvium. 821

Four pathogenic strains of TMV on tomato. 890

Diagnostic aids in distinguishing internal browning and graywall of tomato. 908

Bacterial spot of tomato as influenced by temperature and by age and nutrition of the host. 912

Physiology of bacterial spot of tomato. 913

Variations in respiratory responses in Fusarium-infected tomato plants. 971

The pseudo-curly top disease in south Florida. 992

Alteration of the incidence of Botrytis cinerea on tomato by liming the soil. 1001

Pseudomonas solanacearum in Israel. 1029

The effect of tobacco mosaic virus on tomato yield. 1037

Preliminary studies on the effect of lygus bugs on the set and yield of tomatoes. 1092

Seasonal distribution of drosophilid flies in Beltsville, Maryland, tomato fields. 1262

Tomato yields and leaf miner infestations and a sequential sampling plan for determining need for control treatments. 1269

Tomato, Lycopersicon esculentum, and Lycopersicon species and genetic markers in relation to mite, Tetranychus marianae, infestations. 1270

Variations in leaf miner and flea beetle injuries in tomato varieties. 1274

Determination of amiben in tomatoes by electron affinity gas chromatography. 1427

Phorate residues in tomato fruit and foliage. 1532

Toxicity of chemical and microbial insecticides to pest and beneficial insects on poled tomatoes. 1691

Phytotoxicity of herbicides: Reduction of 3-amino-1,2,4-triazole phytotoxicity in tomato plants. 1701

Baited traps for sampling Drosophila populations in tomato field plots. 1943

TOPICAL SUSCEPTIBILITY
Topical susceptibility to viruses. 1052

TOXAPHENE
Control of ticks on cattle with toxaphene applied by power sprayer and spray race. 1369

Insecticide residues: Toxaphene residues on pangolagrass. 1533

Insecticide measurement: Determination of toxaphene by a spectrophotometric diphenylamine procedure. 1833

TOXICITY
Chemical structure and toxicity of some carbamoyloxy phosphorodithioates to susceptible and organophosphorus-resistant strains of mites. 1628

TOXICOLOGY
The acute oral toxicities of some insecticides to American cockroaches. 461

Field tests for the control of certain alfalfa insect pests in New York. 1115

Insecticidal field trials for the control of potato aphids in New Brunswick, 1948-60. 1206

Tests with systemic insecticides in rabbits as toxicants for body lice. 1331

Toxicological studies of compound VC 1-13 in livestock. 1367

Vaporized Dibrom for control of Drosophila in lemon storage houses. 1387

Toxicity of Dibrom vapors to greenhouse insects. 1406

Fumigation efficiency as affected by exposures, formulations and by insect species and stages. 1474

Acute toxicity of Delnav and its residues in tissues of livestock. 1481

Toxicity of several insecticides to the adult alfalfa seed chalcid in laboratory tests. 1545

Effect of formulation on toxicity to plants and insects of some systemic insecticidal seed dressings. 1546

Toxicity of some pesticides to eggs, larvae, and adults of the green lacewing, Chrysopa carnea. 1549

Inhibition of cholinesterase and ali-esterase in parathion and paraoxon poisoning in the house fly. 1552

A one-year study of the toxicity of ethambutol in dogs: results of gross and histopathologic examinations. 1564

Herbicide toxicity:Mammalian toxicity of Sesone herbicide. 1565

Effect of sesamex on toxicities of individual pyrethrins. 1569

Gossypol extractants: Oral toxicity to poultry of a commercial octylamine. 1571

Phytotoxicity of gas mixtures: Plant damage and eye irritation from ozone-hydrocarbon reactions. 1583

A comparative study of toxicological test methods on a population of the two-spotted spider mite (Tetranychus telarius). 1588

Insecticidal properties of sevin against some stored-grain insects. 1592

Toxicity of intravenously injected uranium in guinea pigs. 1594

Toxicologic investigations of Delnav. 1599

The synergism of substituted phenyl N-methylcarbamates by piperonyl butoxide. 1600

The acute toxicity of pesticides to rats. 1602

Symposium on the mechanism of action of pesticide chemicals. 1616

Laboratory trials of six polybutene emulsions against the

two-spotted spider mite. 1617

Toxicity of the dialyzable fraction of the venom of the yellow scorpion, Leirus quinquestriatus, to the migratory locust. 1632

Horn fly and face fly control studies with Dow M-1816. . 1634

Chronic toxicologic studies on isopropyl N-(3-chiorophenyl) carbamate (CIPC) . 1635

Imported fire ant toxic bait studies: GC-1283, a promising toxicant. 1639

Toxicologic investigations of polyacrylamides. 1644

Insecticidal carbamates:comparison of the activities of N--methyl and N,N-dimethylcarbamates of various phenols. 1649

Toxicology of hydroxypyridinethione. 1653

2-(p-tert-butylphenoxy)isopropyl 2-chloroethyl sulfite (Aramite) I.Acute, subacute, and chronic oral toxicity. 1661

Toxicologic studies with branched and linear alkyl benzene sulfonates in rats. 1662

Chronic toxicity of Santomerse no.3 from Olefin (dodecyl benzene sodium sulfonate). 1669

Herbicide toxicology: Toxicology of dalapon sodium (2,2-dichloropropionic acid, sodium salt). 1670

The vapor toxicity of certain bromopropanes to the grape phylloxera under controlled laboratory conditions. 1673

Toxicology of wood preservatives to swine. 1685

The fumigant toxicity of two new chemicals to stored-product insects. 1697

Preliminary report of selenium toxicity in sheep. 1704

Acute and subacute toxicity of Trithion and the dimethyl homolog. 1712

Toxicology of pyridinethiones. 1713

Toxicity of PCNB to Magnolia fuscata. 1720

Similar metabolic alterations induced in sweet potato by poisonous chemicals and by Ceratostomella fimbriata. 1800

A thermal preference method of biossay of the toxicity of insecticidal films to house flies. 1979

TOXINS
The role of fumaric acid, a fungal toxin, involved in the hull rot disease of almond. 894

A quantitative method for determining fumaric acid, a toxin involved in the hull rot disease of almond. 895

Toxin production by Helminthosporium victoriae on synthetic media containing different nitrogen sources. 1725

TRACTORS
A simple and inexpensive tractor-mounted inoculum applicator* 1969

TRAP COLLECTIONS
Aphid trap collections over a three-year period from four southern Florida locations. 253

TREE CONTROL
Effect of stem girdling of citrus seedlings on size of Phytophthora gummosis lesions. 788

TREE DISEASE RESISTANCE
The susceptibility of twenty-three tree species to black root rot. 955

TREE DISEASES
New test varieties for exocortis virus. 964

European elm scale control investigations. 1015

TREE INJURIES
Salt injury to trees. 1618

TREE PLANTING
Control of the peach tree borer on young peach trees by a treatment before planting. 1239

TREES
Infestation patterns of Douglas-fir beetle in standing and windthrown trees in southern Idaho. 63

Suppression of the reproductive potential of the codling moth by gamma irradiated males in caged orchard trees. 709

Occurrence of Cytospora canker in stone fruit trees in California. 876

Twig feeding by the smaller European elm bark beetle on different kinds of trees. 1070

Tests of systemics for control of birch leaf miner. 1229

Effect of delayed spraying on cankerworm control. 1316

Preliminary observations concerning the use of systemic insecticides in large trees for control of the European elm scale. 1708

A cage for collecting insects from tree stems and branches. 1904

TRIALKYL PHOSPHOROTETRATHIOATES
Fungicidal activity and structure: Preparation and fungitoxicity of some trialkyl phosphorotetrathioates. 1686

TRIAZINE
Metabolism of triazine herbicides by plants. 1776

TRIBOLIUM CONFUSUM
Respiration measurement of Tribolium confusum by gas chromatography. 324

TRICARBOXYLIC ACID CYCLE
Turnover of certain Krebs citric-acid intermediates in healthy and rusted tissues. 1756

TRICHLORFON
Polymerization as a means of prolonging effectiveness of orally administered systematic insecticides. 521

Seed treatment with phorate, disulfoton, and other insecticides to control pea insects in Iraq. 1060

Residues in cattle tissues following back-line and spray applications of trichlorfon 1422

Dylox residues on vegetable crops. 1521

TRICHODERMA
Effects of Streptomyces and Trichoderma on Fusarium. 770

TRICHODORUS
Greenhouse pathogenicity trials with nematode-infested soil. 1296

TRICHOGRAMMA
Effect of Trichogramma releases on parasitism of sugarcane borer eggs. 1077

TRICHOMETASPHAERIA TURCICA
Adaptation of the corn leaf blight fungus to a resistant and a susceptible corn host. 946

TRICHOPLUSIA NI
Effects of cold storage on egg viability of the cabbage looper and some aspects of the biology of the progeny survivors. 475

A simple artificial rearing medium for the cabbage looper. 606

A genetic factor controlling color and its association with dDT sensitivity in the cabbage looper. 705

Sequential sampling for use in control of the cabbage looper on cauliflower. 1124

Effects of some chemosterilants on the viability of eggs,

TRICHOPTERA
fecundity, mortality, and mating of the cabbage looper. 1615
Results of cage experiments with sterile male releases and a chemosterilant technique for control of cabbage looper populations. 1623

TRICHOPTERA
Five new species of the caddisfly Polycentropus from South America (Trichoptera: Polycentropodidae). 260

TRIFOLIATE ORANGES
Exocortis and other problems with trifoliate orange rootstock. 939
Incidence of bud-union crease in citrus trees grafted on trifoliate rootstock in the Delta del Parana and San Pedro areas of Argentina. 1023

TRIMEDLURE
Volatility and attractiveness to the Mediterranean fruit fly of trimedlure and its isomers, and a comparison of its volatility with that of seven other insect attractants. 519

TRINIDAD
The tachinids of Trinidad. V. Siphosturmiines and Masiphyiines. 226
The tachnids of Trinidad IV. Winthemiines. 227

TRISTEZA (CITRUS)
Presence of seedling yellows complex in the citrus of South India. 766
Tristeza tolerant rootstocks - their behavior after twelve years in orchard. 897
Stem pitting problem in a Pera sweet orange fertilization experiment. 950
Stem pitting and decline of Pera sweet oranges in the state of Sao Paulo. 960
Partial purification of tristeza virus. 989

TRITICUM SP.
Larval growth as a method of screening Triticum sp. for resistance to the cereal leaf beetle. 1228

TRITIUM
A simple technique for tritiation of aromatic insecticides. 1927

TROGODERMA
Crossbreeding studies with seven species of Trogoderma. 637

TROGODERMA GLABRUM
Mating competition of gamma-irradiated and nonirradiated male Trogoderma glabrum Herbst. 710

TROGODERMA GRANARIUM
A study of the khapra beetle, Trogoderma granarium, in commercial grain storages in southern Arizona. 161

TROMBICULA SPLENDENS
Experiments with homogenates of larvae of Trombicula splendens. 1333

TROMBICULIDAE
N-alkyl toluamides in cloth as repellents for mosquitoes, ticks, and chiggers. 394
Dimensions of the clear areas in the skin of chicks that resulted from the feeding by larvae of two strains of Trombicula splendens at different periods. 1332
Experiments with homogenates of larvae of Trombicula splendens. 1333
In vivo studies of tissue reaction in chicks resulting from the feeding by larvae of Trombicula splendens. 1334

TRUNKS
Trunk and branch canker of coffee trees in Guatemala. 999

TRYPANOSOME
The diurnal feeding activity of Glossina palpalis palpalis Aust. in relation to trypanosome challence. 488

TRYPANOSOMIASIS
A trial use of grass-mat passages in protecting humans from attacks by tsetse flies. 713

TRYPSIN
Enzyme inhibition: The trypsin inhibitor of alfalfa. 1787

TSUGA
A field test with insecticides to control the scale Fiorinia externa on Canadian hemlock. 1258
Persistance of dimethoate residues in hemlock treated for hemlock fiorinia scale as determined by oxygen flask combustion. 1525

TURNIPS
Control of root maggots on radish, turnip, and rutabaga in Wisconsin. 1099
Oils and surfactants alone, and insecticide-oil combinations for aphid control on turnips and cabbage. 1714
Naturally occurring insecticides in cruciferous crops. 1760

TWIG BLIGHT (PLATANUS)
The early leaf and twig blight stage of sycamore anthracnose. 915

TWIG WASP
The twig oak wasp of cork oak- its biology and control. 1

TYLENCHIDA
Mechanism of swarming in Tylenchlorhynchus species (Nematoda, Tylenchida). 1295

TYLENCHORHYNCHUS
Mechanism of swarming in Tylenchlorhynchus species (Nematoda, Tylenchida). 1295

TYROPHAGUS PUTRESCENTIAE SCHRANK
Acaricide bioassay: Two organisms suitable for bioassaying specific acaricides. 1808

UGANDA
The control of yellow tea mite, Hemitarsonemus latus (Banks), with DDT on cotton in Uganda. 1141

ULMUS AMERICANA
Twig feeding by the smaller European elm bark beetle on different kinds of trees. 1070

ULTRASONIC WAVES
Effect of ultrasonic waves on the hatching of Aedes aegypti eggs at a frequency of 0.5 megacycles per second. 576

ULTRAVIOLET RAYS
Ultraviolet radiation as an attractant for adult horn flies. 528
The effect of radiation to pyrethrins applied to cattle. 1356
The stabilising effect of piperonyl butoxide on pyrethrins exposed to ultra-violet light. 1590

UNITED STATES
Mexico-United States cooperative plant pest control programs. 1090

UNITED KINGDOM
The infestation of Canadian produce inspected in United Kingdom ports between 1953 and 1959. 1140

UNITED STATES
First findings of cotton leafworm larvae in the United States, 1922 to 1963. 171

UREA
Review of disappearance of substituted urea herbicides from soil. 1419
Urea poisioning of cattle. 1659
Biuret formation in the manufacture of urea. 1837

UREDINALES
Asexual variants of Melampsora lini. 801

Rust fungi on native and cultivated rhododendrons in California. 921

UREDIOSPORES
Factors affecting germinability of urediospores of Puccinia coronata. 835

Fertilization of pycnia with urediospores in Puccinia graminis var. tritici. 1740

UREDOSPORES
Protein synthesis by nongerminated fungal spores including uredospores of the bean rust fungus. 1002

Uredospore production by Uromyces phaseoli. 1051

Partial purification of self-inhibitors of germination from uredospores of Uromyces phaseoli var. typica. 1723

URINE
Determination of micro amounts of isopropyl N-(3-chlorophenyl)carbamate.(CIPC) in milk and urine excreted from dairy cows. 1461

UROMYCES PHASEOLI
Uredospore production by Uromyces phaseoli. 1051

UROMYCES PHASEOLI VAR. TYPICA
Partial purification of self-inhibitors of germination from uredospores of Uromyces phaseoli var. typica. 1723

USTILAGINALES
Dominance of avirulence and monogenic control of virulence in race hybrids of Ustilago avenae. 836

Kansas aeromycology, VII. Smuts. 927

USTILAGO NUDA
A seedling test for detecting viable Ustilago nuda mycelium following barley seed treatments. 899

USTILAGO TRITICI
Root and shoot development of wheat infected with loose smut, Ustilago tritici. 882

UTAH
An instance of delayed emergence of the Douglas-fir beetle and its effect on an infestation in southern Utah. 1117

VACUUM CLEANERS
Modification of a vacuum cleaner for capturing German and brown-banded cockroaches. 1989

VACUUM DISTILLATION
Soil fumigant determination: Extraction and determination of ethylene dibromide in soils. 1836

VACUUM-INFILTRATION
Amino acid requirements for the wheat stem sawfly determined with glucose-U-C14 after vacuum-infiltration. 457

VAPORS
Vaporized Dibrom for control of Drosophila in lemon storage houses. 1387

Toxicity of Dibrom vapors to greenhouse insects. 1406

Comparative fungitoxicity of some mono- and dialkyi-substituted dithiocarbamate vapors and solutions. 1751

VARIEGATION
Infectious variegation of citrus found in Florida. 822

VASATES SCHLECHTENDALI
New materials for the control of the apple rust mite. 1138

VASCULAR DISEASES
Watermelon disease incidence in central Florida, 1931-1959. 974

VEGETABLES
A cage to contain small insects during pollination studies. 589

Vegetable diseases in North Carolina during 1958 and 1959. 1046

Granulated systemic insecticides for vegetable insect control in south texas. 1126

Host plant preference of the six-spotted leafhopper. 1257

Chemical control of slugs affecting vegetables and strawberries in thePacific Northwest. 1297

Pesticides and food flavor:Influence of herbicides on flavor of processed fruits and vegetables. 1498

Pesticides and food flavor:Effect of insecticides and fungicides on the flavor quality of fruits and vegetables. 1505

Dimethoate residues in leafy crops. 1507

Dylox residues on vegetable crops. 1521

Uptake and distribution of strontium in vegetables and cereals. 1737

VEIN BANDING (STRAWBERRIES)
Differential transmission of four strains of strawberry vein banding virus by four aphid vectors. 805

VEIN NECROSIS (ALFALFA)
Vein necrosis, another systemically infectious strain of alfalfa mosaic virus in bean. 1053

VENOMS
Toxicity of the dialyzable fraction of the venom of the yellow scorpion, Leirus quinquestriatus, to the migratory locust. 1632

Comparative lethality of several Latrodectus venoms. 1645

The effect of Latrodectus mactans tredeciguttatus venom on the endogenous activity of Periplaneta americana nerve cord. 1657

Effects of venom from the scorpion, Centruroides sculpturatus on the rat. 1667

Intraventricular injection of venom. 1683

Action of Latrodectus mactans tredecimguttatus venom and fractions on cells cultivated in vitro. 1705

Biochemical studies of the venom from the scorpion, Centruroides sculpturatus. 1707

VENTURIA INAEQUALIS
Metabolism in vitro of phloridzin and other host compounds by Venturia inaequalis. 1748

VERTICILLIUM
Nitrogen supplement in the Louisiana-Mississippi river delta as a possible control for Verticillium wilt of cotton. 914

Occurrence of Verticillium wilt on peanuts. 998

Evaluation of cotton strains and progenies for resistance to Verticillium wilt. 1042

Role of pectic enzymes in susceptibility and resistance to Fusarium Verticillium wilts of plants. 1736

VERTICILLIUM ALBO-ATRUM
The amount of Verticillium albo-atrum in Idaho certified. potato seed. 823

Symptoms of Verticillium wilt of castor bean. 904

Relation of age of potato plants to infection by Verticillium albo-atrum. 1016

The survival of Verticillium albo-atrum in muck soils. 1411

VERTICILLIUM ALBO-ATRUM VAR. MENTHAE
Studies of the host specificity of Verticillium albo-atrum var. menthae. 804

VERTICILLIUM WILT (EGGPLANT)
Increase in the incidence of Verticillium wilt of eggplant in the presence of Pratylenchus penetrans. 903

VETCH

VETCH
Effect of gibberellic acid on the extraction of protein from the leaves of spring vetches (Vicia satina L.). 1730

VIABILITY
Influence of cold storage on the viability of alfalfa weevil eggs and feeding ability of hatching larvae. 341

VICIA SATINA L.
Effect of gibberellic acid on the extraction of protein from the leaves of spring vetches (Vicia satina L.). 1730

VICTORIA BLIGHT (OATS)
Inheritance and linkage studies of a derived Victoria-type crown rust resistance and Victoria blight. 873

Victoria-type resistance to crown rust separated from susceptibility to Helminthosporium blight in oats. 874

VIKANE
Drywood termite metabolism of Vikane fumigant as shown by labeled pool technique. 1848

VINYL ESTERS
Insecticide toxicity: Preparation and biological activity of a series of halogenated ethyl and vinyl dimethyl phosphate esters. 1846

VIRGINIA
Occurrence of the egg parasite Closterocerus cinctipennis in Virginia. 153

VIRILE SUSCEPTIBILITY
Dosages of nuclear-polyhedrosis virus effective against Malacosoma disstria with notes on interspecies susceptibility. 483

VIRULENCE
Virulence of Pseudomonas solanacearum as influenced by proportion of virulent to avirulent cells. 729

Effect of culture substrate on the virulence of single-basidiospore isolates of Peniicularia filamentosa. 993

VIRUS DISEASES (PLANTS)
Seasonal flights of insect vectors of several plant viruses in southern Arizona. 38

A virus disease of Hibbertia scandens. 797

Recovery of X-disease virus from naturally infected milkweeds. 814

Characteristics of plant-virus inhibitors in rice, Oryza sativa. 846

Virus diseases of sweet potatoes in Israel. 868

Viruses in sweet lime rootstock in Bella Vista, Corrientes. 949

On the infectivity dilution curve of plant viruses. 986

Additional evidence that sweetpotato mosaic virus is a strain of tobacco mosaic virus. 988

A virus disease of hops, Humulus lupulus, in Washington. 996

The natural occurrence of tobacco ringspot virus. 1022

A virus-caused stunt of apricot and its relationship to certain other stonefruit virus diseases. 1032

Pathological histology of Tabasco pepper plants infected with tobacco etch virus. 1039

Topical susceptibility to viruses. 1052

The influence of a virus disease and parasites on Spilonota ocellana in apple orchards. 1144

Heat-induced abnormalities - a model disease. 1724

Crambe: susceptibility to some plant viruses. 1797

VIRUS INCIDENCE
Incidence of different types of psorosis in citrus varieties in the state of Sao Paulo. 954

New test varieties for exocortis virus. 964

VIRUS PURIFICATION
Partial purification of tristeza virus. 989

VIRUS 2 (BEANS)
Temperature effecting a reversal of dominance in the resistance of Pisum sativum to bean virus 2. 977

VIRUSES
Preliminary field evaluation of a noninclusion virus for control of the citrus red mite. 396

A virus disease of Coleopterous insects. 479

Dissemination of nuclear polyhedrosis virus against the forest tent caterpillar, Malacosoma disstria (Hubner) (Lepidoptera : Lasiocampidae). 624

Report and abstracts of the 1959 meeting of the northeastern division of the American Phytopathological Society. 717

Two viruses that induce symptoms typical of June yellows in lettuce. 792

Relative infection potentials of rootstock and scion in increasing virus incidence in the deciduous tree fruit nursery. 813

A tobacco-necrosis-like virus isolated from potato-tuber lesions and California soils. 815

Formation of local lesions on Gomphrena globosa by viruses from red clover. 817

Experimental control of phony peach virus vectors with Disyston. 847

Identifying two sweet potato viruses with paper chromatography. 867

Hoja blanca transmission studies on rice. 889

The pseudo-curly top disease in south Florida. 992

A virus of wide host range seed-borne in Phaseolus vulgaris. 995

Morphological differentiation of spherical viruses by electron microscopy. 1004

Necrotic ringspot, a new virus disease of cultivated blueberry. 1025

Soil inhibits infection with tobacco necrosis virus. 1050

Leafhoppers attacking alfalfa in the Salt River Valley of Arizona. 1195

Aster yellows control in head lettuce and carrots in Prince Edward Island. 1248

VISUAL CLASSIFICATION
Detecting corn seedling differences in the greenhouse by visual classification of damage by the fall armyworm. 1268

VOLATILE SUBSTANCES
Chemical studies on the herring (Clupea harengus). XI Preliminary gas-chromatographic study of volatile sulphur compounds produced during the cooking of herring. 1479

VOLATIZATION
The effect of humidity on the volatization of certain insecticides. 1494

VOLUMETRIC ANALYSIS
An acid method for the volumetric estimation of water-soluble dithiocarbamates. 1858

WALNUTS
Fumigant residues: Retention of acrylonitrile and carbon tetrachloride by shelled walnuts fumigated with Acryion. 1434

WANDO PEAS
Relationships of population increase of Pratylenchus penetrans to vegetative growth of Wando peas. 1287

WASHINGTON
Carbaryl, phosphamidon, and DDT tests on the western hemlock looper in Washington. 313

The black vine weevil Brachyrhinus sulcatus, as a pest of grapes in south central washington. 775

A virus disease of hops, Humulus lupulus, in Washington. 996

Control of the black vine weevil on concord grapes in central Washington. 1086

Endosulfan, oxydemetonmethyl, and endrin in control of the green peach aphid and suppression of leaf roll in potatoes in eastern Washington. 1207

WATER
Water and food relationship of the eggs and first instar nymph of Eurygaster integriceps with the aid of P32. 574

Cereal aphid capture in yellow baffle trays. 1087

Effect of water solubility and soil moisture upon plant uptake of granulated systemic insecticides. 1218

Insecticide solubility: Solubility of carbon-14 DDT in water. 1817

WATER CONSUMPTIVE USE
Mechanics of water transport in healthy and Fusarium-wilted tomato plants. 790

WATER SOLUBILITY
An acid method for the volumetric estimation of water-soluble dithiocarbamates. 1858

WATER TABLE
Effects of water levels on the overwintering survival and emergence of the larch sawfly in a bog habitat. 104

WATER TREATMENT
Tolerance of some imported vegetables to methyl bromide fumigation and hot water treatments. 721

Cattle grub control by the addition of a systemic insecticide to drinking water. 1336

Laboratory tests of insecticides on mosquito larvae in polluted and tap water. 1637

WATERMELONS
Watermelon disease incidence in central Florida, 1931-1959. 974

WEATHER
Seasonal biology of the balsam woolly aphid on Mt. Mitchell, North Carolina. 5

The importance of timing in adult grasshopper surveys. 50

Seasonal abundance of the screw-worm in northern mexico. 91

Hessian fly larval strain responses to simulated weather conditions in the greenhouse and laboratory. 414

The relation of weather to two population declines of the black-headed budworm, Acleris variana (Fernald) (Lepidoptera:Tortricidae), in coastal Alaska. 595

Watermelon disease incidence in central Florida, 1931-1959. 974

WEED CONTROL
Some concepts on the ecological basis of biological control of weeds. 1320

WEEDS
Relation of structure to phytotoxicity of s-triazine herbicides on cotton and weeds. 719

WESTERN FLOWER THRIPS
Damage to safflower plants by thrips and lygus bugs and a study of their control. 1081

Systemic insecticides for the control of western flower thrips on bulb onions. 1123

WESTERN UNITED STATES
Studies on the feeding behavior of alfalfa weevil adults from the eastern and western united states. 119

WHEAT
Observations on emergence and life-span of wheat bulb fly, Leptohylemyia coarctata (Fall.) ditions. 361

Chemical control of the pale western cutworm infesting wheat in Alberta, Canada. 450

Amino acid requirements for the wheat stem sawfly determined with glucose-U-C14 after vacuum-infiltration. 457

The development and habits of the granary weevil, Sitophilus granarius within the kernel of wheat. 472

Half-life of effectiveness against stem rust of systemic chemicals in wheat seedlings. 727

Induced susceptibility of wheat and barley to oat crown and stem rust fungi. 753

Losses to winter wheat from infection by septoria tritici. 760

Some metabolic changes in wheat due to stem rust infection and different temperatures. 812

Root and shoot development of wheat infected with loose smut, Ustilago tritici. 882

Relations between inoculum density and infection of wheat by uredospores of Puccinia graminis var. tritici. 935

Wheat bunt development in relation to postinfection environment. 941

Survival of physiologic races of Puccinia graminis var. tritici on wheat near barberry bushes. 945

Use of benzimidazole and excised wheat seedling leaves in testing resistance to Septoria tritici. 981

Controlling hessian fly with phorate and disulfoton. 1072

A method and machine for detecting living internal insect infestation in wheat. 1096

Evaluation of brown wheat mite control on yield of winter wheat in Kansas. 1097

Resistance of spring wheats to the wheat stem sawfly, Cephus cinctus Nort. (Hymenoptera: Cephidae II. resistance to the larva. 1136

Wheat crops and native prairie in relation to the nutritional ecology of Camnula pellucida (Scudder) (Orthoptera: Acrididae) in Saskatewan. 1203

Application of systemic insecticides as seed treatment to protect wheat plants against grasshoppers and wheat stem sawfly. 1238

Field-plot tests of chemicals for wheat stem sawfly control. 1256

Effect of foliage infestation of the english grain aphid on yield of triumph wheat. 1275

Relationships of insects to hot spots in stored wheat. 1385

Exploratory tests with bromodan as a protectant for wheat against stored-product insects. 1388

Preference of Tribolium castaneum for wheat containing various percentages of dockage. 1393

Effects of temperature, reduced pressure, and moisture content on sorption and retention of ethylene dibromide by wheat and corn. 1398

Wheat fracturing as affecting infestation by Cryptolestes ferrugineus. 1400

Dissipation of diazinon residues in wheat. 1515

Recovery of ethylene dibromide residues from fumigated whole

WHITE CLOVER
kernel and milled wheat fractions. 1522

The fate of sulfuryl fluoride in wheat flour. 1847

WHITE CLOVER
Relationship between injury by the clover root curculio and incidence of Fusarium root rot in Ladino white clover. 820

Heat-induced stolon rot of ladino white clover in the greenhouse. B55

Heterodera trifolii, a foliage pathogen of white clover. 1310

WHITE HORSENETTLE
White horsenettle or silverleaf nightshade, an important host of lygus bugs. 242

WHITE ROT (APPLES)
The occurrence of a variety of enzymes hydrolyzing cell wall polysaccharides in apples rotted by Botryosphaeria ribis. BB3

WHITEFLES
Tests with systemic insecticides for control of insects and certain diseases on potatoes. 1125

WHITEFLY
Studies with whitefly parasites of Southern California. I. Encarsia pegandieila Howard (Hymenoptera: Aphelinidae). 393

A new record of a whitefly, Aleurodes spiraeoides Quaintance, infesting cotton, with a note on its parasites. 1119

WHOLE KERNEL WHEAT
Recovery of ethylene dibromide residues from fumigated whole kernel and milled wheat fractions. 1522

WHORL
Growth and yield of grain sorghum infested in the whorl with fall armyworm. 1132

WILD INSECTS
Sexual acceptability of laboratory strains of male house flies in competition with wild strains. 388

WILDFIRE (TOBACCO)
Difference in the behavior of the Nicotiana longiflora wildfire resistance locus in tobacco varieties burley 21 and ky 61. 1005

WILT
A Fusarium wilt of Tagetes.
olsen, carl m. 722

Symptoms of Verticillium wilt of castor bean. 904

WILT (BANANAS)
Physical barriers in relation to Fusarium wilt resistance in bananas. 739

WILT (CARNATION)
Control of vascular wilt diseases of carnation by culture-indexing. 916

WILT (CARNATIONS)
Influence of nitrogen and potassium nutrition levels on the development of Fusarium systemic wilt of carnations. 811

WILT (COTTON)
Nitrogen supplement in the Louisiana-Mississippi river delta as a possible control for Verticillium wilt of cotton. 914

Etiology of wilt in fusarium-infected cotton. 1007

Evaluation of cotton strains and progenies for resistance to Verticillium wilt. 1042

WILT (CUCURBIT)
Some observations on Erwinia tracheiphila, the causal agent of the cucurbit wilt. 755

WILT (OAK)
Bionomics of the bark beetle Pseudopityophthorus pruinosus with special reference to its role as a vector of oak wilt, Ceratocystis fagacearum. 188

Distribution of Ceratocystis fagacearum in roots of wilt-infected oaks in North carolina. 749

The effects of temperature and moisture on oak wilt development. B37

WILT (OAT)
Susceptibility of various apple varieties to the oak wilt fungus. 735

WILT (PEANUTS)
Occurrence of Verticillium wilt on peanuts. 998

WILT (RED CLOVER)
The mechanism of wilting incited by Fusarium in red clover. 769

WILT (SEDUM)
Fusarium wilt of Sedum. 942

WILT (TOMATOES)
Mechanics of water transport in healthy and Fusarium-wilted tomato plants. 790

WINE MANUFACTURE
Chemical and microbiological surveys on the effects of dithiocarbamate fungicides on wine-making. 1443

WINGS (INSECTS)
Wing base structure in Lepidoptera. III. Taxomic characters. 209

Wing base structure in Lepidoptera. II. Hind wing base. 210

Wing base structure in Lepidoptera I. fore wing base. 211

WINTER MORTALITY
Winter mortality of boll weevils in cotton bolls in South Carolina. 526

WISCONSIN
The spotted alfalfa aphid in Wisconsin. 36

Pupation sites of the eye-spotted bud moth, Spilonota ocellana and differences in degree of development on two apple varieties in Wisconsin. 124

Spiders on apple in Wisconsin and their abundance in a natural and two artificial enviroments. 125

Anthophora (Clisodon) terminalis Cresson in trap-nests in Wisconsin (Hymenoptera: Anthophoridae). 149

Bionomics of the destructive prune worm, Mineola scitulella, on sour cherry in Wisconsin. 163

An ecological study of arthropod populations on apple in northeastern Wisconsin: species affecting the fruit. 165

Additional studies on the bionomics of the eye-spotted bud moth, Spilonota ocellana, on sour cherry in Wisconsin. 166

Deterioration of immature jack and red pine plantations in Wisconsin. 861

Control of root maggots on radish, turnip, and rutabaga in Wisconsin. 1099

Foliage-feeding Lepidoptera on young nonbearing apple trees in Wisconsin. 1161

Natural biotic control factors of the eye-spotted bud moth, Spilonota ocellana on apple in Wisconsin. 1162

WITLOOF CHICORY
Effect of soft rot bacteria and pectolytic enzymes on electrical conductance of witloof chicory tissue. B06

WOOLLY PINE NEEDLE APHID
The life history and ecology of the woolly pine needle aphid Schizolachnus pini-radiatae (Davidson) (Homoptera: Aphidae). 74

The fungus Empusa aphidis Hoffman parasitic on the woolly pine needle aphid, Schizolachnus pini-radiatae (Davidson). 411

WORLD HEALTH ORGANIZATION
Laboratory technique for evaluating and detecting horn fly populations that are susceptible or tolerant to four insecticides by using a modified WHO test kit. 532

WOUND-TUMOR (CLOVER)
Biochemical studies of the clover root tumors induced by wound-tumor virus. 937

X-RAYS
Sterilization of the male alfalfa weevil (Hypera postica: Curculionidae) by x-radiation. 315

Effects of 300 KV X-ray radiation on Sitophilus oryzae. 444

Plant tissue analysis: X-ray fluorescence determination of zinc in plant tissues. 1801

XANTHOMONAS LAMPESTRIS
Studies on control of black rot of Crucifers with antibiotics. 859

XANTHOMONAS VESICATORIA
Variability of Xanthomonas vesicatoria in the Everglades and Lower East Coast of Florida. 1011

XIPHINEMA AMERICANUM
Dagger nematodes associated with forage crops in New York. 1318

XYLEM
Effect of charge of ionized chemotherapeutants on their translocation through xylem. 1738

XYLOPOROSIS (CITRUS)
Experimental evidence that cachexia and xyloporosis are caused by the same virus. 771

The question of seed transmission of cachexia-xyloporosis virus. 772

Cachexia and xyloporosis-are they caused by the same virus. 896

Evidence that xyloporosis virus does not pass through seeds of Palestine sweet lime. 925

Reaction of types of citrus as scion and as rootstock to xyloporosis virus. 968

YELLOW DWARF (BARLEY)
Insecticide treatments for aphid control in relation to spread of barley yellow dwarf virus. 786

Transmission of barley yellow dwarf virus to oats by aphids made virulliferous by needle injection. 905

Transmission of barley yellow-dwarf virus by four biotypes of the corn leaf aphid, Rhopalosiphum maidis. 959

A survey of the world barley collection for resistance to barley yellow dwarf. 969

YELLOW DWARF (SWEETPOTATOES)
The feathery mottle virus complex of sweetpotato. 834

YELLOW MOSAIC (BEANS)
A population of self-fertile red clover necrotic-spotting with a strain of bean yellow mosaic virus. 785

YELLOW ROSE APHID
The yellow rose aphid, Rhodobium porosum (Sanderson) (Homoptera: Aphididae), on strawberry. 1172

YELLOW SCORPION
Toxicity of the dialyzable fraction of the venom of the yellow scorpion, Leirus quinquestriatus, to the migratory locust. 1632

YELLOW SWEETCLOVER
Biochemical studies of the clover root tumors induced by wound-tumor virus. 937

YELLOWS (LETTUCE)
Aster yellows control in head lettuce and carrots in Prince Edward Island. 1248

YOUDEN SQUARE
The Youden Square as an experimental design for the field evaluation of boll weevil insecticides. 1607

ZARIA PROVINCE
The mosquitos of Zaria Province, Northern Nigeria. 78

ZEADIATRAEA GRANDIOSELLA
Extension of the incubation period of southwestern corn borer eggs by refrigeration. 636

ZECTRAN
The effect of various adjuvants on the systemic insecticidal activity of phorate and Zectran. 1642

Identification of metabolites of Zectran insecticide in broccoli. 1803

ZINC
Plant tissue analysis: X-ray fluorescence determination of zinc in plant tissues. 1801

ZINOPHOS
The spectrophotofluorometric determination of O,O-diethyl O-2-pyrazinyl phosphorothioate (Zinophos) and its oxygen analog in soil and plant tissues. 1484

ZOALENE
Feed additive residues:Determination of 3,5-dinitro-o-toluamide (Zoalene) in chicken tissues. 1523

Feed additives: Determination of 3,5 dinitro-o-toluamide (zoalene) in feed concentrates. 1861

Identification of the metabolites of 3,5-dinitro-o-toluamide -C14 (Zoalene) in chicken tissues. 1862

The identification of 3,5-dinitro-o-toluamide (Zoalene) and possible metabolites by paper chromatography. 1863

ZOLONE
Rates of disappearance of zolone and imidan from alfalfa. 1518

ZOOSPORES
Histological studies on penetration of pea roots by zoospores of Aphanomyces eutelches. 780

The production and use of zoospore suspensions of phytophthora spp. for investigations of diseases of citrus. 860

Chemotaxis of zoospores for root exudates in relation to infection by Phytophthora cinnamomi. 1055

1-CHLORO-2-NITROBENZENE
Herbicide residues: Colorimetric microdetermination of 1-chloro-2-nitrobenzene in pineapple. 1536

2-CHLORO-S-TRIAZINE
Tolerance of several grass species to 2-Chloro-s-triazine herbicides in relation to degradation and content of benzoxazinone derivatives. 1744

2-CHLOROALLYL-NN-DIETHYLDITHIOCARBAMATE
Metabolism of alpha-chloro-N,N-diallylacetamide(CDAA) and 2-chloroallyl-N,N-diethyldithiocarbamate(CDEC) by plants. 1750

2-ETHYLTHIOETHANOL
Isotope-labeled insecticides:Preparation of labeled 2-ethylthioethanol, a demeton intermediate. 1834

2-IMIDAZOLIDINONE
2-Imidazolidinone as an insect growth inhibitor and chemosterilant. 608

2-PHENYLETHYLISOTHIOCYANATE
Naturally occurring insecticides in cruciferous crops. 1760

2,2,4-TRIMETHYL-1,3-PENTANEDIOL
Field and laboratory repellency tests with 2,2,4-trimethyl-1,3-pentanediol (TMPD). . 392

2,6-DICHLORO-4-NITROANILINE

2,6-DICHLORO-4-NITROANILINE
Colorimetric determination of 2,6-dichloro-4-nitroaniline in plants and soil. 1517

3,4-METHYLENEDIOXYPHENYL
Identification of 3, 4-methylenedioxyphenyl synergists by thin-layer chromatography. 1878

3,5-DINITRO-O-TOLUAMIDE
The isolation and identification of the amino-nitro-o-toluamide formed by the biological reduction of 3,5-dintro-o-toluamide. 1860

The identification of 3,5-dinitro-o-toluamide (Zoalene) and possible metabolites by paper chromatography. 1863

3,5-DINITRO-O-TOLUAMIDE-C14
Identification of the metabolites of 3,5-dinitro-o-toluamide -C14 (Zoalene) in chicken tissues. 1862

4-(2,4-DB)
Degradation of 4-(2,4-dichlorophenoxy)-butyric acid (4-(2,4-DB)) in plants. 1766

4-DIMETHYL-AMINO-3,5-XYLYL METHYLCARBAMATE
Determination of residual 4-dimethylamino-3,5-xylyl methyl-carbamate and 4-dimethylamino-3,5-xylenol by use of luteo-arsenotungstic acid. 1497

4-DIMETHYLAMINO-3,5-XYLENOL
Determination of residual 4-dimethylamino-3,5-xylyl methyl-carbamate and 4-dimethylamino-3,5-xylenol by use of luteo-arsenotungstic acid. 1497

5-CHLORO-4-ARYL-1,2-DITHIOL-3-ONE
Two fungicidally active 5-chloro-4-aryl-1,2-dithiol-3-ones derived from cumene and p-cymene. 1824

5-FLUOROURACIL
The effects of 5-fluorouracil on the viability of house fly eggs. 468

Insect chemosterilants: incorporation of 5-fluorouracil into house fly eggs. 469

6-METHYL-3-CYCLOHEXENE-1-CARBOXYLIC ACID
Tert-butyl and tert-pentyl esters of 6-methyl-3-cyclohexene-1-carboxylic acid as attractants for the Mediterranean fruit fly. 296

Abedi, Z H
Institute Of Tropical Medicine, Harbel, Liberia 261
Adkins Jr, T R
Chemagro Corp 1422
Adkins, Jr, T R
Chemagro Corporation 1423
Adkisson, P L
U. S. Dept. Of Agriculture
Entomology Research Division 10S9
Ambrose, A M
Medical College Of Va., Richmond 1S40
Anderson, J R
L. S. Public Health Service
National Institutes Of Health 267
Anderson, N H
Southern Forest Disease And Insect Research Council 1871
Antonides, H J
Scientific Associates Inc., St. Louis, Mo. 1S41
Areekul, S
Kasetsart University, Bangkok, Thailand
Dept. Of Entomology 1B0B
Arias, R O
Food Machinery And Chemical Corp., Richmond, Calif.
Niagara Chemical Division 1809
Atallah, Y H
U. S. Dept. Of Agriculture
Agriculture Research Service
Entomology Research Division 1S44
Attiah, H H
Louisiana State University B
Bailey, G W
U. S. Public Health Service, Athens, Ga.
Division Of Water Supply And Pollution Control 1404
Ball, H J
University Of Nebraska
Dept. Of Entomology 276
Bang, Y H
Washington State University, Pullman
Dept. Of Entomology 1067
Bang, Y H
Washington State University, Pullman
Dept. Of Entomology 1379
Barnharst Sr, C S
Dept. Of The Navy
Bureau Of Yards And Docks 1B7S
Baumhover, A H
U.s. Dept. Of Agriculture, Kerrville, Tex.
Agricultural Research Service
Entomology Research Division 2B9
Bega, R V
University Of California, Berkeley 740
Berger, R S
Auburn University, Auburn, Alabama
Dept. Of Zoology-entomology 294
Berger, R S
U. S. Dept. Agriculture, Brownsville, Tex. 1B12
Black, J H
California Agricultural Extension Service, Bakersville 297
Boush, G M
University Of Wisconsin
Dept. Of Entomology 15S5
Boyd, C E
U. S. Public Health Service
National Institutes Of Health 1405
Brady Jr, U E
Public Health Service
National Institutes Of Health
Division Of Research Grants 1SS6
Brady Jr, U F
National Institutes Of Health
Public Health Service
Division Of Research Grants 30S
Braverman, S W
U. S. Dept. Of Agriculture, Geneva, N.Y.
Agricultural Research Service
Crops Research Division 751
Braverman, S W
U. S. Dept. Of Agriculture, Geneva, N.Y.
Agricultural Research Service
Crops Research Division 7S2
Brazzel, J R
Mississippi State University
Entomology Dept. 309
Brown, I F
Eli Lilly Co. 1559
Brydon, H W
California Dept. Of Public Health 1BB1
Buffam, P E
U. S. Dept. Of Agriculture, Berkeley, Calif.
Forest Service
Pacific Southwest Forest And Range Experiment Station 1B
Buffam, P E
U. S. Forest Service, Berkeley, Calif.
S. W. Forest And Range Experiment Station 313
Bull, D L
American Cyanamid Co., Princeton, N. J. 1S60
Burkholder, W F
Agriculture Research Service, Fresno, Calif.
Market Quality Research Division
Stored-products Insects Research Branch 316
Bursell, E
University College Of Rhodesia-Nyasaland, Salisury
Dept. Of Zoology 319
Burton, R L
Entomology Research Division 1BB4
Callahan, P S
National Science Foundation 322
Calvert, O H
U. S. Dept. Of Agriculture
Agricultural Research Service
Crops Research Division 762
Campbell, R N
University Of California, Davis 76S
Carlson, S D
U. S. Dept. Of Agriculture
Agricultural Research Service
Market Quality Research Division
Stored Product Insects Research Branch 324
Chang, S C
Agricultural Research Service, Beltsville, Md.
Entomology Research Division
Pesticide Chemicals Research Branch 1S69
Chansler, J F
U. S. Dept. Of Agriculture, Denver, Colo.
Forest Insect And Disease Control Branch
Forest Service, Region 2
Division Of Timber Management 1S70
Chauthani, A R
Georgia Coastal Plain Experiment Station, Tifton
Southern Grain Insects Research Laboratory 26
Clark, E W
U. S. Forest Service, Durham, N. C.
Forestry Sciences Laboratory 333
Cochran, D G
U. S. Public Health Service
Bureau Of State Services
Division Of Environmental Engineering And Food Protection 337
Connola, D P
U. S. Dept. Of Agriculture, West Haven, Conn.
Forest Service
Forest Insect Laboratory
Northeastern Forest Experiment Station 339
Coppel, H C
Wisconsin Conservation Dept.
Shell Chemical Co.
American Oil Co. 10BB
Cordero, A D
University Of Costa Rica, San Jose
Dept. Of Entomology 77B
Cross, H F
National Institute Of Allergy And Infectious Diseases 1332
Cross, H F
National Institute Of Allergy And Infectious Diseases 1334
Dahlsten, D L
T. B. Walker And Surdna Foundations 41
Dauterman, W C
N. C. State College, Raleigh
Pesticide Residue Laboratory 351
Dauterman, W C
American Cyanamid Co. 1451
Davich, T B
Boll Weevil Research Laboratory, Starkville, Miss. 697
Davis, R
University Of Georgia
Dept. Of Entomology 3S4
Dean, H A
Humble Oil And Refining Company 1735
Dean, R W
Hudson Valley Lab., Highland, N.y. 1095
Deema, P
Central Experiment Station, Bangkhen, Bangkok, Thailand
Plant Industry Division
Pesticide Residue Lab 1586
DeFollart, G R
Shell Chemical Company 133S
DePew, L J
Kansas Agricultural Experiment Station 1097
DePew, L J
Kansas State University

Dittrich, V
Dept. Of Entomology 1382
Dittrich, V
National Institutes Of Health
Public Health Service 1588
Doane, J F
Canada Department Of Agriculture, Saskatoon, Saskatchewan
Research Station 698
Doane, J F
Canada Dept. Of Agriculture, Saskatoon, Saskatchewan
Research Station 1099
Dorsey, C K
Geigy Chemical Corporation, Ardsley, N. Y. 364
Drea, J J
U. S. Dept. Of Agriculture, Moorestown, N.J.
Agricultural Research Service
Entomology Research Division 45
Duffus, J E
U. S. Dept. Of Agriculture, Salinas, Calif.
Agricultural Research Service
Crops Research Division 1383
Duye, M T
U. S. Dept. Of Agriculture
Plant Quarantine Division 369
Eads, R B
U. S. Dept. Of HEW, new Orleans, La.
U. S. Public Health Service
Quarantine Station 794
Edwards, R L
Canada Dept. Of Agriculture, Saskatoon
Research Station 51
Eheart, J F
U. S. Dept. Of Agriculture, Beltsville, Md.
Agricultural Research Service
Human Nutrition Research Division I455
Eighme, L E
Pacific Union College I385
El-Sebae, A H
University Of Assiut, Egypt I825
Eldefrawi, M E
National Research Center, Cairo, Egypt 372
Enan, O
University Of Alexandria, Egypt
High Institute Of Public Health 374
Enan, O
University Of Alexandria, Egypt
High Institute Of Public Health 1593
Eschle, J L
Wisconsin Alumni Research Foundation
Mink Farmers Research Foundation I322
Evans, D A
Kalamazoo College, Mich.
Dept. Of Biology 1905
Fang, S C
Stauffer Chemical Co. 1409
Ferguson, D C
Yale University, New Haven, Conn.
Peabody Museum 55
Finnegan, R J
Forest Insect Laboratory, Sault Ste. Marie, Ontario 58
Finnegan, R J
Forest Research Laboratory, Quebec I112
Fiori, B J
California Chemical Company, Moorestown, N J
Ortho Division
Eastern Research Laboratory 1595
Flint, H M
U. S. Dept. Of Agriculture, Fargo, N. Dak.
Agrarian Research Service
State University Station
Entomology Research Division 381
Flint, H M
North Dakota State University, Fargo
College Of Pharmacy I906
Franks, R F
Tide Products, Inc., Mercedes, Tex. 384
Frings, H
National Science Foundation 1907
Fukuto, T R
U. S. Public Health Service I600
Fukuto, T R
U. S. Public Health Service I829
Fulkerson, J F
U. S. Dept. Of Agriculture, Beltsville, Md.
Agricultural Research Service
Crops Research Division 807
Gallun, R L
Purdue University
Entomology Dept. 1118
Gegering, Q A
Chesterford Park Research Station, Safiron Walden, England 390
Graham, H M
Entomology Research Division, Brownsville, Tex.
Plant Pest Control Division, Harlingen, Tex. 70
Graham, J H
U. S. Dept. Of Agriculture
Agricultural Research Division
Crops Research Division 818
Greene, G L
Central Florida Experiment Station, Sanford 409
Hagley, A C
Tate And Lyle Ltd., Carapichaima, Trinidad
Central Agricultural Research Station 1605
Hair, J A
Virginia Polytechnic Institute
Dept. Of Entomology 1915
Hanec, W
Entomology Research Institute For Biological Control 77
Hansens, E J
Olin Mathieson Corp.
Squibb Institute For Medical Research 1608
Harein, P K
U. S. Dept. Of Agriculture, Savannah, Ga. 1389
Harein, P K
U. S. Dept. Of Agriculture, Savannah, Ga. 1474
Hargett, L T
Geigy Agricultural Chemicals, Yonkers, N. Y. 418
Harrell, E
Agricultural Engineering Research Division 1919
Havens, R
University Of Missouri, Columbia
Dept. Of Chemistry 1476
Hawkins, W B
U. S. Public Health Service, Savannah, Ga.
Communicable Disease Center
Technical Development Laboratories 1835
Hays, S
Clemson University
Entomology Dept. 1612
Hays, S B
Georgia Coastal Plains Experiment Station, Tifton, Ga. 431
Hays, S B
Georgia Coastal Plain Experiment Station, Tifton 432
Henderson, C F
Oklahoma State University 1132
Hendrick, R D
Agricultural Research Technology
Entomology Research Division 831
Hightower, B G
P.o. Box 986, Mission, Tex. 89
Holman, J R
U. S. Dept. Of Agriculture
Agricultural Research Service 93
Holston Jr, J T
Mississippi Agricultural Experiment Station, Stoneville
Delta Branch 719
Hooper, G H S
University Of Queenland, Brisbane, Australia
Dept. Of Entomology 443
Hoover, D L
Public School System, E. Baton Rouge Parish, La. 444
Horsfall, W R
Division Of Research Grants
National Institutes Of Health 1929
Howitt, A J
Michigan State University, East Lansing 1297
Huffaker, C B
1050 San Pablo Avenue, Albany, Calif. 100
Huffman, C W
International Minerals And Chemical Corp., Skokie, Ill.
Central Research Laboratories 1625
Hughes, P R
U. S. Cotton Research Station, Shafter, Calif. 1931
Hughes, R B
C. And T. Harris Ltd., Calne, England 1479
Jackson, R D
U.s. Dept. Of Agriculture, Columbia, Mo.
Agricultural Research Service
Entomology Research Division 449
Jantz, O K
National Science Foundation 452
Jay Jr, E G
U. S. Dept. Of Agriculture
Agricultural Marketing Service
Stored-Product Insects Laboratory, Savannah, Ga. 1346
Jaycox, E R
University Of Illinois
Dept. Of Horticulture 453
Jenkins, J N
Boll Weevil Research Laboratory

Crops Research Division 1148
Jones, P A
Wisconsin Conservation Dept. 455
Josephson, L M
U. S. Dept. Of Agriculture
Agriculture Research Service
Crops Research Division 1151
Kearby, W H
Nekoosa-Edwards Foundation Inc. 110
Kearby, W H
Wisconsin Conservation Dept.
NekoosaEdwards Foundation, Inc. 459
Keilen, W R
University Of California, Berkeley
Dept. Of Biological Control
Laboratory Of Insect Pathology 111
Keiler, J C
U. S. Dept. Of Agriculture, State College, Miss.
Agricultural Research Service
Entomology Research Division
Boll Weevil Research Laboratory 462
Keller, J C
International Atomic Energy Agency, Vienna, Austria 464
Kevan, D K M
McGill University, Quebec, Canada
Dept. Of Entomology 115
Killough, R A
Entomology Research Division 471
Kilpatrick, J W
National Institutes Of Health, Box 195, Chamblee, Ga.
NIAID
Laboratory Of Parasite Chemotherapy 1633
Kirkpatrick, R L
National Institutes Of Health
Public Health Service 1934
Kishaba, A N
University Of Nebraska, Lincoln
Dept. Of Entomology 474
Kishaba, A N
U. S. Dept. Of Agriculture, Riverside, Calif.
Agricultural Research Service
Entomology Research Division 476
Knapp, F W
University Of Kentucky, Lexington 1348
Knowles, C O
University Of Missouri
Dept. Of Entomology 1350
Knutson, L V
National Institute Of Allergy And Infectious Diseases 118
LaBrecque, G C
Office Of The Surgeon General, U. S. Army
Medical Research And Development Command 1636
LaChance, L E
U. S. Dept. Of Agriculture, State University Station, N. d.
Metabolism And Radiation Research Laboratory
Radiation Biology And Insect Genetics Section 703
Ladd Jr, T L
U. S. Dept. Of Agriculture, Moorestown, N. J.
Agricultural Research Service
Entomology Research Division 1757
Lammers, G W
Ferguson Fumigants, Inc., Hazlewood, Md. 1937
Larsen, J R
University Of Illinois
Dept. Of Entomology 486
Legner, E F
University Of California, Riverside
Dept. Of Biological Control 124
Legner, E F
University Of California, Davis
Dept. Of Biological Control 125
Legner, E F
University Of California, Riverside
Dept. Of Biological Control 489
Legner, E F
University Of California, Riverside
Dept. Of Biological Control 1162
Legner, E F
University Of California, Davis
Dept. Of Biological Control 1939
Lichtenstein, E P
Shell Development Company 1492
Lingren, P D
Oklahoma Cotton Research Foundation
Union Carbide Chemicals Company, New York, N.Y.
Shell Development Company, Modesto, California 493
Lippold, P C
Food Machinery And Chemical Corp.
Niagara Chemical Division 495
Lowry, W L
Texas Agricultural Experiment Station, College Station 501
Mailloux, M
Quebec Agricultural Reseach Council 509
Manglitz, G R
South Dakota State University
Dept. Of Entomology And Zoology
Kansas State Board Of Agriculture, Manhattan 141
Manglitz, G R
U. S. Dept Of Agriculture, Gulfport, Miss.
Agriculture Research Service
Entomology Research Division
White-fringed Beetle Investigations 1176
Mansingh, A
Queen s University, Kingston, Ontario, Canada
Dept. Of Biology 511
Matteson, J W
U.s. Dept. Of Agriculture, Brookings, S. Dak.
Agricultural Research Service
Entomology Research Division
Northern Grain Insects Research Laboratory 1178
Matteson, J W
U. S. Dept. Of Agriculture, Brookings, S. D.
Agricultural Research Service
Entomology Research Division
Northern Grain Insects Research Laboratory 1642
Matteson, J W
Monsanto Company, St. Louis, Mo.
Insecticide Chemicals Development Dept.
Agricultural Division 1944
Matteson, J W
Monsanto Company, St. Louis, Mo.
Agricultural Division
Insecticide Chemicals Development Dept 1945
Maxwell, F G
U. S. Dept. Of Agriculture
State College, Miss.
Entomology Research Division 1181
Maxwell, H G
Entomology Research Division 1184
McCay, C F
U. S. Public Health Service
Division Of Research Grants Of The National Inst. Of Health 1499
McClanahan, R J
Canada Dept Of Agriculture, Harrow, Ontario
Research Station 517
McEwen, F L
U. S. Public Health Service
National Institute Of Allergy And Infectious Diseases 705
McFadden, M W
U. S. Dept. Of Agriculture, Oxford, N.C.
Agricultural Research Service
Entomology Research Division
Tobacco Insect Investigations 518
McGregor, T
Headquarters Fourth U. S. Army, Fort Sam Houston, Tex. 1646
Medler, J T
Wisconsin Alumni Research Foundation 149
Meeks Jr, R A
Mississippi Agricultural Extension Service, State College 522
Mengle, D C
State Of California, Bakersfield
Dept. Of Public Health
Community Study Of Pesticides 523
Merki, M E
State College, Miss.
Boll Weevil Research Laboratory 1189
Metcalf, R L
U.s. Public Health Service 1647
Metcalf, R L
U. S. Public Health Service 1648
Metcalf, R L
U. S. Public Health Service 1649
Metcalf, R L
U. S. Public Health Service 1650
Metcalf, R L
Cotton Producers Institute 1850
Milne, A
Agricultural Research Council Unit Of Insect Physiology 525
Mitchell, E R
Georgia Coastal Plain Experiment Station, Tifton 526
Moe, R A
Hoffman-La Roche, Nutley, N. J.
Pharmacology Dept. 1653
Mook, L J
Department Of Forestry Fredericton, Can.
Forest Research Laboratory 152
Moore III, s
Illinois Natural History Survey 1191

Morgan, N O

Morgan, N O
Agricultural Research Center, Beltsville, Md. 528
Morgan, N O
Fly Control Investigations, Beltsville, Md.
Research Center 530
Morgan, N O
Agricultural Research Center, Beltsville, Md. 532
Morgan, N O
Fly Control Investigations, Beltsville, Md.
Research Center 533
Morris, A P
U. S. Public Health Service, Miami, Fla.
Communicable Diseases Center
Aedes Aegypti Eradication Branch 535
Morris, K R S
Makerere College Medical School, Kampala, Uganda
Dept. Of Pathology 1952
Moseman, J G
U. S. Dept. Of Agriculture, Beltsville, Md.
Agricultural Research Service
Crops Research Division 900
Mulla, M S
University Of California, Riverside
Citrus Research Center And Agricultural Experiment Station
539
Mumma, R O
Regional Research Funds 1504
Murphy, M R V
National Science Foundation 541
Nelson, R R
U. S. Dept. Of Agriculture, Raleigh, N. C.
Agricultural Research Service
Crops Research Division 917
Nelson, R R
North Carolina State College, Raleigh 918
Nelson, R R
North Carolina Agricultural Experiment Station 919
Nethery, A
National Institutes Of Health
National Science Foundation
Michigan State Agricultural Experiment Station 707
Nickle, W R
University Of California, Davis
Dept. Of Plant Nematology 1306
Niemczyk, H D
Canada Dept. Of Agriculture,chatham, Ontario
Entomology Laboratory 550
Niemczyk, H D
Canada Dept. Of Agriculture, Chatham, Ontario
Entomology Laboratory 1658
O Neil, K
U. S. Dept. Of Agriculture
Agricultural Research Service
Entomology Research Division 162
Oatman, E R
University Of California, Riverside
Citrus Research Center
Agricultural Experiment Station 163
Oatman, E R
Florica Citrus Experiment Station, Lake Alfred 165
Oatman, E R
University Of California, Riverside
Citrus Research Center And Agricultural Experiment Station
Dept. Of Biological Control 1197
Oatman, E R
University Of California, Riverside
Citrus Research Center
Agricultural Experiment Station
Dept. Of Biological Control 1199
Overby, L R
University Of Illinois, Urbana
Dept Of Microbiology 1510
Pady, S M
U. S. Public Health Service 927
Painter, R R
U. S. Public Health Service
National Institutes Of Health
National Cancer Institute 557
Parencia Jr, C R
U. S. Dept. Of Agriculture, Beltsville, Md.
Agricultural Research Service
Entomology Research Division 172
Parish, J C
Kansas State University, Manhattan
Dept. Of Entomology 1666
Parrish, D W
Walter Reed Army Medical Center, Forest Glen Section, D. C.
Armed Forces Pest Control Board
Military Entomology Information Service
Biomedical Sciences Corps. 558

Patterson, R A
National Heart Institute 1667
Pine, T S
U. S. Dept. Of Agriculture, Riverside, Calif.
Agricultural Research Service
Crops Research Division 1204
Poinar Jr, G O
University Of California, Riverside
Citrus Research Center
Agricultural Experiment Station
Dept. Of Biological Control 178
Polcik, B
U. S. Public Health Service
National Institutes Of Health
Division Of General Medical Sciences 568
Pressey, R
General Mills, Inc., Minneapolis, Minn. 720
Puttler, B
Us Dept Of Agriculture, Columbia, Mo.
Biological Control Of Insects Investigations 572
Quraishi, M S
C E N T O Institute Of Nuclear Science, Tehran, Iran 573
Qurishi, M S
North Dakota State University
Dept. Of Entomology 575
Qureshi, A H
Research Station, Karachi-28, West Pakistan
Dept. Of Plant Protection 183
Radcliffe, E B
University Of Minnesota, St. Paul
Dept. Of Entomology, Fisheries, And Wildlife 1213
Radcliffe, E B
University Of Minnesota, St. Paul
Dept. Of Entomology, Fisheries And Wildlife 1214
Randell, R L
Canada Dept. Of Agriculture, Saskatoon, Saskatchewan
Research Branch
Research Station 184
Rawlins, W A
Agricultural Division 1217
Rawlins, W A
University Of California, Riverside
Dept. Of Biological Control 1677
Read, D C
Canada Dept. Of Agriculture, Charlottetown
Experimental Farm 579
Reiling, T P
Green Giant Company, Dayton, Wash. 943
Reinhardt, J F
Shell Chemical Company, New York N. Y. 178B
Ridgway, R L
A. And M. College Of Texas, College Station 586
Riehl, L A
University Of California, Riverside
Dept. Of Entomology 587
Rivera, C T
Guinobatan Experiment Station, Philippines 58B
Roan, C C
Geigy Agricultural Chemicals, Australia 1515
Robbins, R C
University Of Florida, Gainesville
Agricultural Experiment Station
Dept. Of Food, Technology And Nutrition 1789
Roberts, R H
Delta Branch Experiment Station, Stoneville, Miss. 1681
Roberts, R J
C.s.i.r.o., New South Wales, Australia
Division Of Entomology 1418
Robertson Jr, R S
San Jose State College, California
Dept Of Science Education 548
Roburn, J
Laboratory Of The Government Chemist, Strand, London
Dept. Of Scientific And Industrial Research
Clement s Inn Passage 1517
Rodriguez, J G
Association Nacional del Cafe 590
Roth, Vincent D
University Of California, El Centro
Agricultural Extension Service 1222
Rudinsky, J A
National Science Foundation 201
Russell, F E
U. S. Public Health Service
National Institute Of Neurological Disease And Blindness
1683

Sanchez, F F
University Of The Philippines
College Of Agriculture And Central Experiment Station
Geigy Chemical Corp.

University Of California, Riverside 16B4
Saunders, D S
University Of Edinburgh, Scotland 202
Saunders, D S
University Of Edinburgh, Scotland
Dept. Of Zoology 203
Scheffer, R P
National Science Foundation 971
Schoenburg, R B
California Dept. Of Public Health Research 206
Scott, C B
Collier Carbon And Chemical Corp., Santa Clara, Calif. 16B6
Segall, R H
International Cooperation Administration 979
Shands, W A
U. S. Public Health Service 9B3
Sherman, M
National Institutes Of Health
Public Health Service
Division Of Research Grants 1689
Shorey, H H
Public Health Service
National Institute Of General Medical Sciences 213
Simanton, W A
Humble Oil And Refining Co. 196B
Simkover, H G
Shell Development Co., Emeryville, Calif.
Patent Division 60B
Simons, J N
Stanford Research Institute, South Pasadena, Calif. 609
Simons, J N
Stanford Research Institute, South Pasadena, Calif. 992
Sims Jr, A C
Southern University, Baton Rouge, La.
Dept. Of Biology 993
Singh, S R
National Science Foundation 610
Skaptason, J S
Chemagro Corporation, Kansas City, Mo. 1360
Smith, R H
U.s. Dept. Of Agriculture, Berkeley, Calif.
Forest Service
Pacific Southwest Forest And Range Experiment Station 215
Smythe, R V
Wisconsin Alumni Research Foundation 61B
Soliman, S A
Ain-shams University, Cairo, Egypt
Faculty Of Science
Entomology Dept. 620
Solomon, J D
U. S. Dept. Of Agriculture, Stoneville, Miss.
Southern Forest Experiment Station 621
Solomon, J D
Southern Hardwoods Laboratory 622
Sparks, A N
U. S. Dept. Of Agriculture, Stillwater, Okla.
Agricultural Research Service
Entomology Research Division 216
Sparks, A N
U. S. Dept. Of Agriculture, Stillwater, Okla.
Agricultural Research Service
Entomology Research Division 217
Spishakoff, L M
U. S. Dept. Of Agriculture, Monterrey, Mexico
Agricultural Research Service
Plant Pest Control Division 623
Stark, R W
T. B. Walker Foundation 219
Stark, R W
T B Walker Foundation 1242
Starks, K J
U. S. Dept. Of Agriculture, Tifton, Ga.
Agricultural Research Service
Southern Grain Insects Investigation 1003
Starks, K J.
U. S. Dept. Of Agriculture, Tifton, Ga.
Agricultural Research Service
Southern Grain Insects Investigations 1244
Starr, R I
Colo. State University, Fort Collins
Dept. Of Botany And Plant Pathology 1321
Stephen, W P
National Science Foundation 632
Stephens, C S
Grenada Company, Puerto Libertador, Dominican Republic 1313
Sterling, W L
U. S. Dept. Of Agriculture
Entomology Research Division 633
Sternburg, J
Rockefeller Foundation 169B
Stokes, G W
University Of Kentucky, Lexington 1005
Streams, F A
University Of Connecticut
Dept. Of Zoology And Entomology 223
Subba-Rao, N S
University Of Toronto, Canada
Dept. Of Botany 1007
Sund, K A
Hawaiian Sugar Planters Association, Honolulu, Hawaii
Experiment Station 1701
Swanson, M C
Shell Chemical Corporation, New Orleans, La. 1246
Sylvester, E S
U. S. Public Health Service 1009
Tantawy, A O
Alexandria University
Faculty Of Agriculture 644
Thomason, I J
University Of California, Riverside 1014
Tilton, E W
U. S. Dept. Of Agriculture, Savannah, Ga.
Agricultural Research Service
Market Quality Research Division
Stored-Product Insects Research-Development Laboratory 649
Tonn, R J
American Philosophical Society 1361
Triplehorn, C A
Ohio Agricultural Experiment Station, Wooster 1399
Tsao, P
Wisconsin Alumni Research Foundation 101B
Uchida, T
Agricultural Chemicals Division
Sankyo Company Ltd., Shiga, Japan 65B
Uchida, T
Sankyo Co., Yasu, Japan
Agricultural Chemicals Dept 1B67
van der Zwet, T
Louisiana State University, Baton Rouge 723
Van Middlelem, C H
Dept. Of Food Technology And Nutrition, Gainesville, Fla. 1532
Vernon, F
Pure Chemicals, Ltd., Liverpool, England 1B6B
Vickery, V R
Lyman Entomological Museum 233
Vickery, V R
Lyman Entomological Museum 234
Wallace, J B
The Moorman Manufacturing Company 1363
Watson, T F
Auburn University
Dept. Of Zoology-Entomology 1261
Watt, D D
Institute Of Neurological Diseases And Blindness 1707
Watt, K E F
University Of California, Davis
Dept. Of Zoology 19B2
Wave, H E
University Of Massachusetts 239
Wave, H E
University Of Massachusetts
Dept. Of Entomology And Plant Pathology 19B3
Webb, B D
Corn Products Co., New York, N. Y. 1377
Wene, G P
U. S. Dept. Of Agriculture
Agricultural Research Service
Entomology Research Division 670
Wene, G P
U. S. Dept. Of Agriculture, Phoenix
Agricultural Research Service
Entomology Research Division
Cotton Insects Research 1263
Westigard, P H
Oregon State University, Medford
Southern Oregon Branch Experiment Station 243
Wilde, G
Kansas State University, Manhattan
Dept. Of Entomology 675
Wildman, S G
U S Atomic Energy Commission
Division Of Biology And Medicine 1040
Wilks, J M
Canada Dept. Of Agriculture, Summerland
Research Station 1043
Willard, J R
University Of Adelaide, South Australia
Waite Agricultural Research Institute 679
Williams, J R

Wilson, B H

Dept. Of Agriculture, Mauritius. 249
Wilson, B H
National Institutes Of Health 1365
Wilson, L F
Michigan State University, East Landing 251
Wilson, L F
North Central Forest Experiment Station
East Lansing, Mich. 680
Wolfenbarger, D A
U. S. Dept. Of Agriculture, Brownsville, Tex.
Agricultural Research Service
Entomology Research Division
Subtropical Experiment Station, Homestead, Fla. 1269
Wolfenbarger, D A
U. S. Dept. Of Agriculture
Entomology Research Division
Brownsville, Texas 1270
Wolfenbarger, D A
Texas Agricultural Experiment Station, Weslaco
Substation No. 15 1271
Wolfenbarger, Da
U. S. Dept. Of Agriculture, Brownsville, Tex.
Agricultural Research Service
Entomology Research Division 1274
Wood Jr, E A
U. S. Dept. Of Agriculture, Stillwater, Okla.
Agricultural Research Service
Ertomology Research Division 1275
Wood, D L
National Science Foundation 255
Wood, D L
Boyce Thompson Institute For Plant Research, Inc. 1276
Wray, C
Michigan College Of Mining And Technology, Saulte St. Marie
Saulte St. Marie Branch
Forestry Dept. 689
Wright, C G
National Pest Control Association
Research Fund 258
Yadav, R P
Southern University, Baton Rouge, La.
Biology Dept. 693
Yamamoto, Toshio
National Science Foundation 260
Yarwood, C E
National Science Foundation 1050
Zaumeyer, W J
U. S. Dept. Of Agriculture
Agricultural Research Service
Crops Research Division 1053
Zschintzsch, J
Georg August University, Gottingen, Germany
Institut Fur Pflanzenschutz Und Pflanzenpathologie 1718
Zuckerman, B M
U. S. Dept. Of Interior 1719
Zweig, G
Weizmans Institute Of Science, Rehoveth, Israel 1537
Zweig, G
Food Machinery And Chemical Corp., Middleport, N. Y.
Niagra Chemical Division 1538

Abdalla, D A 303
Abdel-Malek, A A 644
Abedi, Z H 261
Abid, M 22
Abrams, G D 1562
Acree Jr, F 1B05
1B06, 1B17
Adams, J M 1424
1476
Adams, T S 540
Adkins Jr, T R 1422
1915
Adkins, Jr, T R 1423
Adkisson, P L 633
105B, 1059
Adkissow, P L 314
Adler, V E 262
630, 1245
Adrilenas, P 71B
Afrikian, E G 263
Agee, H R 264
641
Ahmad, S H 576
Aichele, M D 746
Akbar, S S 115
Al-Azawi, A F 1060
Al-isohaily, I A 724
1721
Alexander, L J 725
Alexander, M W 1555
Alicino, W J 1B07
Allen, G E 1061
Allen, R S 720
Allen, S E 1625
Allen, T C 61B
B46
Allen, W W 1062
Aller, H E 265
Alley, D A 90
266
Allington, W B 726
Alumot, E 1539
Ambrose, A M 1540
Amerson, G M 1924
Amman, G D 5
1063
Andersen, A S 727
Anderson, C A 1424
1476
Anderson, D L 16B7
Anderson, H L 693
Anderson, J R 267
Anderson, L D 271
1521
Anderson, N H 1B71
Andres, L A 26B
269
Angalet, G W 269
Anglin, C 1425
Angus, T A 4B2
Anliker, R 1426
Antonides, H J 1541
Apple, J W 510
Apt, W J 127B
Arant, F S 24
1079
Archer, T E 1537
153B
Areekul, S 1B0B
Arias, R O 1215
1542, 1B09
Armbrecht, B H 1543
Armbrust, E J 1064
Arndt, R G 637
Arnold, H 1870
Arnsman, J C 1893
Arthur, B W 305
1105, 1186, 1350
1453, 1482, 1499
1556, 1665, 1666
Asano, S 543
Ascarelli, I 1441
Ashworth Jr, L J 728
Asquith, D 6
1B72
Atallah, Y H 270
1544
Atkins Jr, E L 271
Atkins, M D 7
14B, 1B73
Attiah, H H B
Atwood, C E 117
706
Augustine, M G 1159
Austenson, H M 127B
Austin, B S 1370
Avens, A W 1702
Averre III, c W 729
9B0
Axelrod, H 53B
Ayerst, G 1371
Ayre, G L 272
Bache, C A 1427
Bacon, O G 273
274, 1065, 1545
Bagent, J L 71
Balgent, N L 1722
Balley, C F 105B
Bailey, G W 1404
Bailey, J C 1452
1735
Bailey, L 275
Balley, S F 1
Bailey, S W 1066
Baker, D N B5
Baker, K F 1B74
Baker, R 916
Bald, J G 730
Balderston, C P 1795
Ball, H J 276
19B4
Balock, J W 277
Bancroft, J B 731
862
Banerjee, A C 27B
279
Banerjee, S N 1550
Banfield, W M 732
Bang, Y H 1067
1379
Banks, W A 2B0
Baranowski, R M 1532
Bardner, R 1546
Bariola, L A 1679
Barlow, C A 9
2B1
Barman, T E 1B10
Barnes, D K 1194
Barnes, E H 733
Barnes, M M 2B2
Barnes, O L 2B3
2B4, 2B5
Barnharst Sr, C S 1B75
Baron, R L 1547
Barr, J T 734
Barras, S J 2B6
Barrett, C C 326
Bart, G J 735
Barthel, W F 142B
1506
Bartlett, B R 2B7
1429, 154B, 1549
Bartlett, F J 1639
Barton, D W 977
Basile, J Y 1109
Baskett, R S 1065
Bass, M H 20B
106B
Basu, A C 1550
Batch Elder, G H 1855
Batchelder, G H 1430
1511
Bateman, D P 736
Batiste, W C 273
Batra, L R 737
Bauer, Wm R 16
Baumgartner, W E 1B43
Baumhover, A H 91
289, 290
Bauriedel, W R 1970
Bayliss, M E 1377
Bayona, I G 712
Beadles, M L 1876
Bean, G A 738
Bean, J L 252
Beards, G W 410
Beck, E W 1069
1431, 1432
Becker, W B 1070
13B0
Beckham, C M 1134
Beckman, C H 739
Beckman, H 1435
Beckman, H F 1B11
Beecham, P T 1445
Beer, J R 1B0
1B1
Bega, R V 740
741
Bell Jr, J C 29
Bell, J W B26
Belt, A A 1723
Belton, P 1B77
Benatena, H N 940
Benda, G T A 1724
Benjamin, D M 110
459
Bennet, S E 291
Bennett, S E 315
1071, 1151
Bennett, W H 1551
Benoit, P 292
Benson, A P 742
Benz, G 293
Beraha, L 137B
Berck, B 1434
Berg, C O 11B
Berger, C 12B2
Berger, C A 999
Berger, R S 294
500, 501, 1B12
Bergman, P W 704
Bergmann, F 1B13
Bergold, G H 4B1
Bernal, E 1370
1587
Beroza, M 295
296, 519, 646
1B05, 1B06, 1B7B
Berry, I L 1345
1B79
Berry, R W 1725
Berry, S Z 743
Berube, J A C 1954
Besemer, S T 1627
Beshear, R J 1134
Besser, J F 1321
Betker, W R 1B3B
Bettini, S 1657
1705
Betz, N L 549
Bevenue, A 1433
Bevirt, J L 1530
Bickley, W E 55B
Bigelow, R S 162
Bigger, J H 1072
Bigley, W C 1552
Bigley, W S 565
Billings, S C 1B14
Billingsley, C H 1910
Bingham, D J 921
Birchfield, W 1279
Bishop, E T 1B70
Bishop, G W 744
Bitancourt, A A 745
Black, D S 1013
Black, J H 297
Blackith, R E 1726
Blair, E H 1B15
Blake Jr, G H 106B
Blanchard, F A 1816
Blickenstaff, C C 262
298, 299, 630
661, 1245
Blincoe, C 1553
Blinn, R C 1435
Blodgett, E C 746
Blume, R R 532
Bobb, M L 10
1554
Bohr, V C 1683
Bondi, A 1441
Bonelli, E J 1BB0
Boosalis, M A 747
Boosalis, M G 1727
Boothroyd, C W 74B
Borden, J H 218
1242
Borkovec, A B 328
401, 1444, 156B
Bornstein, S 1539
Boswell, A L 44B
Bottger, G T 11
300, 301, 302
Boudreaux, H B B
Boulanger, L W 303
Boush, G M 1555
Boutwell, R K 1436
Bove, C 1028
Bove, J M 102B
Bowers, W S 664
Bowery, T G 1437
1470
Bowling, C C 12
1073
Bowman, M C 1432
1446, 1475, 1716
1B06, 1B17, 1921
Boyce Jr, J S 749
Boyd, C E 1405
Boyle, L W B77
Bozarth, R F 953
Bracha, P 143B
Brack, K 1B24
Bracken, G K 77
Bradbury, F R 304
Bradley Jr, J R 71
Bradley, R H E 13
926
Brady Jr, U E 1327
1439, 1556
Brady Jr, U F 305
Brady, U E 306
Brakke, M K 750
Brase, K D B13
Braverman, S W 751
752
Bray, A D 1631
Brazzel, J R 127
307, 30B, 309
516, 619, 1061
Breece, J R 1033
Breese, M H 1074
Brekke, J E 1491
Bremer, H G 1557
Brennan, E 7B1
Brethour, J R 132B
Brett, C H 1075
107B
Briant, A M 148B
1505
Briggs, J D 310
Brindley, T A 216
Brindly, T A 217
Brinkerhoff, L A 12B0
Brodie, B B 12B0
Brooks, A A 14
Brooks, 1 C 155B
Brooks, M A 4B3
Brooks, R F 165
1076
Brown Jr, W M 921
Brown, A L 1B01
1B36
Brown, A W A 261
Brown, B E 311
Brown, 1 F 1559
Brown, N L 499
Brown, R E 172B
Brown, W J 15
Brownell, L E 1562
Browning, J A 753
1729
Brueggemann, J 1440
Brun, W A 1690
Brunton, R B 1321
Brust, R A 575
Bryan, D E 493
1349
Brydon, H W 1881
Buchanan, J R 1601
Bucher, G E 312
Buck, W B 14B1
Buckett, J S 16
Buckle, D J 17
Buckner Jr, G L 1969
Buckner, A J 560
Budd, D 1371
Buddenhagen, I W 754
Budowski, P 1441

8uffam, P E

8uffam, P E 18
19, 313
8ukovac, M J 1799
8uil, D L 314
1560, 1561, 1742
8urbutis, P P 229
8urbutis, Paul P 230
8urchfield, H P 1002
8urden, G S 617
8urditt, A K 581
8urges, H D 1372
1882
8urgess, E E 315
1151
8urke, D W 995
8urkholder, W E 338
649, 650, 651
710
8urkholder, W F 316
8urkholder, W H 755
756, 1010
8urks, 8 D 20
8urnett, H C 757
8urns, C H 1562
Burns, E C 317
384, 1365
8urrel, R W 318
8urrell, N J 1372
8urrell, R W 1077
8ursarius (L.). 21
8ursell, E 319
397
8urt, E C 42
1883
8urton, R L 1243
1884, 1885, 1886
8urts, E C 422
8ushing, R W 255
8ushland, R C 1447
8utcher, J W 320
1459
8utler Jr, G 22
Butler Jr, G D 23
321, 1887
8utler, E E 758
8utt, 8 A 429
Buttery, R G 1818
8yers, J H 1191
8yers, M 1730
8yrne, H D 1442
1888
Cahlll, D 1512
Cairns, E J 1305
Calanan, E C 952
Calandra, J C 1599
Calavan, E C 759
Caldwell, R M 760
981
Calkins, C O 141
704, 1175
Callahan. P S 1889
Callahan, P S 322
1975
Callahan, R A 1518
1520
Calpouzos, L 1012
1890
Caltrider, P G 761
Calvert, O H 762
Cameron, H R 763
Cameron, R H 764
Campbell, J 1672
Campbell, J E 1563
Campbell, J M 590
Campbell, R N 765
Campbell, W 1078
Campbell, W V 323
Campos, E G 794
Canerday, T D 24
1079
Cantrelll, C 1443
Capoor, S P 766
Cappiello, V P 1564
Carlson, C A 1080
Carlson, E C 1081
Carlson, R 8 320
Carlson, S D 324
Carman, G E 1192
Carolln Jr, V M 18
Carpenter, C P 1565
1566
Carter, M C 1186
Cashin, K D 696
Casida, J E 456
1164, 1451
Cast, R T 325
Casterline Jr, J L 1547
Cavanagh, L A 1580
Cetas, R C 767
1290
Chacharonis, P 1541
Chaiet, L 783
Chamberlain, W F 326
1329, 1516, 1567
Chandler, J H 1891
Chang, C 327
Chang, G Y 643
Chang, M T Y 1688
1689
Chang, S C 328
1444, 1568, 1569
1819
Changsri, W 768
Chansler, J F 1570
Chao, J 329
682
Chaplin, C E 1458
Chapman, A J 330
1082, 1188
Chapman, G A 565
Chapman, J A 331
1083
Chapman, P J 1595
Chapman, R A 1281
Chapman, R F 25
Chapman, R K 698
1099, 1213, 1214
Chauthani, A R 26
1889
Cheng, Tien-Hsi 1330
Chi, C C 769
770
Chlang H C 1108
Chiang, H C 216
332, 1084
Child, R 1731
Chllds, D P 1395
Childs, J F L 771
772
Chlllcott, J G 27
28
Chllwell, E D 1445
Chisholm, R D 1417
1699
Chitwood, 8 G 1282
1283
Chlu, R 773
Choy, T K 1807
Christensen, C M 1375
Christenson, C W 1732
Chrlstenson, D M 1352
Chrlstenson, L D 625
Christiansen, D W 759
Ciesla, W M 29
30
Claborn, H V 1446
1447, 1513
Clancy, D W 31
Clark, D G 1287
Clark, E W 169
333
Clark, N G 1820
Clark, P H 334
335
Clark, S P 1571
Clarke, W J 1572
Clayton, C W 1792
Cleary, R W 1159
Cleveland, F P 1573
Cleveland, M L 363
1892
Cleveland, T C 33
42
Cleverley, B 1821
Clifford, C M 1574
Clower, D F 71
Cluett, M L 1448
Coaker, T H 390
Cobb, D L 1893
Cocheo, 8 1823
Cochran, D G 336
337
Cochran, J H 431
432, 1925
Cochran, L C 1204
Cody, C P 433
Coffin, L 8 330
Cogburn, R R 338
649, 650, 651
710, 1381
Coggiola, I M 1085
Cohen, C J 1838
Cohen, M 774
Colberg, C 1890
Cole, M M 334
335, 1331
Cole, S G 1297
Coles, L W 34
Colhoun, E H 1575
Collier, C W 1576
Collins, C 1850
Collins, R J 728
Collins, R P 1733
Collotti, C 1705
Comar, C L 1706
Complin, J O 1628
Concienne, E J 1167
Condrashoff, S F 35
Condron, C H 1406
Cone, W W 775
1086
Connin, R V 1893
Connola, D P 339
1577
Conrad, M S 36
Cook, R J 776
Coon, 8 F 1087
Cooper, W E 1284
Coplan, M 1587
Coppel, H C 455
456, 618, 1088
Corbet, P S 37
711
Corbett, M K 777
Cordero, A D 778
Corey, R A. 194
1578, 1579
Corizzi, F 1023
Corley, C 1428
Cothran, W R 340
341, 1894
Couch, H 8 779
Coudriet, D L 38
Coulson, D M 1580
Courtney, W D 1278
Cowan Jr, C 8 172
1089, 1093, 1200
1584, 1585
Cowan, C 8 1170
Cowan, F T 1947
Cox, H C 1243
1715, 1885, 1886
1975
Cox, J A 1581
Cox, P L 1449
Craig, J 1840
Cralg, R 1795
Crain, A V R 1643
Crawford, E M 1635
Creager, D 8 885
Cremlyn, R J W 1822
Cressman, A W 342
343
Critchfield, F E 1482
1870
Crittenden, C R 581
Cross, H F 344
345, 1332, 1333
1334, 1895
Cross, W H 11
1896
Crossan, D F 1654
1793
Crowe, G 8 1166
Crowell, H H 679
Crystal, M M 346
347, 401
Cumming, M E P 39
Cummings, E C 1897
Cunningham, C J 364
1337
Cunningham, J L 780
Cunningham, V D 348
Curl, L F 1090
Currle, W E 1195
Curry, A N 1450
Curtis, R W 474
Cutcomp, L K 620
Cuthbert Jr, F P 40
349, 1091, 1094
Cutkomp, L K 490
578
Dachauer, A C 1823
Dahigren, D A 1315
Dahlsten, D L 41
Dahlstrom, R V 1843
Dahm, P A 544
Daines, R H 761
Dale, W E 1582
1611
Dallimore, C E 1898
Daly, J M 1756
Dame, D A 350
Dancer, J 1734
Dankins, C 703
Darley, E F 1583
Darroch, J G 684
Daterman, G E 201
Dauterman, W C 351
1451, 1867
Davey, C 8 1783
1784
Daviault, L 61
352
Davich, T 8 42
430, 462, 464
497, 697, 1165
1916
David, W A L 353
Davidson, R H 1159
Davidson, R W 782
1494
Davles, D M 152
Davis, A C 1092
1187
Davis, 8 H 1376
Davis, D 783
1285
Davis, D F 1477
Davis, D W 1939
Davis, J R 798
799
Davis, J W 172
1089, 1093, 1200
1584, 1585
Davls, R 354
1899, 1919
Davis, R 8 91
Dawsey, L H 1431
1432
Day, A 1094
de Ruette, R 15
De Vries, J E 1580
Deak, J 783
Deak, J E 1265
Dean, H A 1452
1735
Dean, R W 1095
1407
Dearman, A V 1900
Decker, G C 278
279
Decker, R W 1096
Deema, P 1586
Deese, D C 1736
DeFoliart, G R 1322
1335
Delchmann, W 8 1370
1587
del Rosaria, M S E 988
DeLyzer, A J 355
411
DeMar Jr, C J 43
Dennis, N M 1096
DePew, L J 1097
1382
Desai, M K 987
Desjardins, P R 933
DeVay, J E 876
894, 895

Devlin, R M 1719
DeWolfe, T A 860
Di Edwardo, A A 1286
Diachun, S 784
785
Diamant, G 403
Dickason, E A 786
Dicke, R J 316
Dickinson, J 1455
Dickson, J G 1014
Dickson, R C 800
Diener, U L 1403
Dietz, A 356
Dilie, J R 1694
Dilier, J D 787
Dillough, R A 357
Dimick, K P 1880
Dimitman, J E 788
789
Dimond, A E 790
1738
Dineen, J P 629
683
Ditman, L P 1500
1507, 1638
Dittrich, V 1588
Diveley, W R 1824
Dixon, E 8 358
Doane, C C 359
791, 1098, 1210
1589
Doane, J F 360
698, 1099
Dobson, R C 1336
1937
Dobson, R M 361
Dodds, M L 1505
Dodge, H R 362
Dolliver, J S 1287
Dolphin, R E 363
Dominick, C 8 44
Donaldson, J M 1590
Donaldson, W E 1508
Dorough, H W 633
Dorsey, C K 188
364, 365, 1154
1337, 1708
Doucette, C F 1100
1101
Douglas, G A 1102
Douglas, W A 1103
Douli, K M 366
Downey, J E 1576
Downs, R J 1746
Drake, R J 1034
Drea, J J 45
Drooz, A T 46
Dropkin, V H 1288
Drummond, R O 403
404, 521, 1104
1338, 1339, 1340
1341, 1368, 1394
1591
Drummond,r O 1369
DuBois, K P 1599
Du8ose, R T 1571
Ducharme, R 352
Duckworth, R 8, 1737
Duffus, J E 792
793, 1383
Duffy, J R 261
Dumas, T 1408
Dunn, C L 1833
Dunn, J A 21
Dunn, P H 367
1342, 1901
Dupree, M 47
491
Durbin, R D 812
Dustan, G G 368
Dutky, S R 638
Dutt, M C 1902
Dutt, N 48
Duye, M T 369
Dyer, D L 1794
Dysart, R J 49
Eabry, H S 1626
Eads, R 8 794
Ebeling, W 370
1903
Eckert, J E 366
Eckert, J W 795
1935
Eddy, G W 492
565
Eden, W G 1105
1186, 1384, 1453
Edgington, L V 790
1738
Edmunds, L K 796
Edwards, L J 371
Edwards, R L 50
51
Egan, H 1454
Eheart, J F 1455
Eicher, T 718
Eichhorn, J L 771
Eide, P M 52
Eighme, L E 1385
El Khaiek, A 1592
El Sebae, H 1592
El-Sebae, A H 1825
Eldefrawi, M E 372
1852
Elgee, D E 547
Elliott, D P 1904
Elliott, R F 1456
Elmer, H S 1106
Elmore, J C 373
Enan, O 374
1593
Endo, R M 797
Engel, R W 1457
England, N C 384
English, H 798
799, 876
English, L L 1107
Epps, J M 1289
Ernst, S E 1339
1369
Erwin, D C 1753
Eschie, J L 1322
Evans, 8 R 1386
Evans, D 53
375
Evans, D A 1905
Eveleens, K G 590
Everett, T R 54
376, 377, 831
Evers, M C 1636
Everson, E H 1118
Ewert, M A 1108
Facto, L A 1974
Fagerson, I S 1505
Fahey, J E 1458
1462
Fahey, J F 1459
Fairchild, M L 216
1891
Falter, J M 323
Fang, S C 1409
1826
Farnell, Daniel R 1594
Farrier, M H 689
Farris, S H 7
Fatzinger, C W 378
Fay, R W 1846
Feder, W A 1292
Feldman, L 1811
Feldmesser, J 1290
Fenley, W R 116
Ferguson Jr, 1461
Ferguson, D C 55
Ferguson, D E 1405
Ferguson, J 906
Ferguson, R 8 1109
Fernando, H E 56
Ferris, J M 1291
Fertig, S N 1471
Fields, R W 943
Fife, L C 379
1110, 1235
Finlayson, D G 1111
Finlayson, T 57
380
Finnegan, J K 1635
Finnegan, R J 58
1112
Fiori, 8 J 1595
Fischang, W J 1519
1687
Fisher, R W 1596
Fisk, F W 1159
Fitzhugh, O G 1543
1547
Flaherty, D 1149
Flaherty, D L 100
Flanders, S E 59
60
Flanigan, J F 1646
Fletcher, L W 699
Flint, H M 381
1906
Flock, R A 800
Flor, H H 801
Floyd, E H 444
Flynn, A D 1460
Foley, D C 802
Foote, W H 786
Foott, W H 382
Forbes, I L 723
803
Forbes, R 1237
1398, 1522, 1859
Forbes, R S 61
Ford, C V 1040
Ford, H W 1292
Fordyce, C 804
Forgash, A J 383
1344
Forman, S E 1827
Forsythe Jr., H Y 1113
Forsythe Jr, H Y 81
1114, 1115, 1597
Fort Jr, S W 660
Fortugno, C 1023
Foster, R E 1185
Fouts, J R 1610
Fowler, E B 1598
1732
Fox, A 718
Fox, C J S 844
Fox, F H 1471
1473
Fox, 1 712
Fox, L F 1387
Foy, C L 1739
Fraenkel, G S 1779
Frank, J R 1769
Frank, M 1657
Franklin, R T 1116
Franks, R F 384
Frawley, J P 1599
Frazar, E D 428
Frazer, E D 426
Frazier, N W 805
Frederickson, M 1648
1832
Frederickson, R L 1664
Fredrickson, R L 1510
Freed, V H 1478
1776, 1826, 1828
Freeman, G D 1762
Freeman, T N 62
Freltag Richard 385
French, D W 1048
Friedland, W C 1865
Friedman, 8 A 806
Frings, H 1907
Frings, M 1907
Frizel, D E 386
Froelich, E J 1643
Frontali, N 1705
Fuertes-Polo, C 1647
Fuester, R W 223
Fugimoto, M S 634
Fujimoto, M S 625
1923
Fukuto, T R 605
1521, 1600, 1647
1649, 1650, 1825
1829, 1830, 1831
1832, 1850
Fulkerson, J F 807
808
Fuller, R G 1881
Fulton, H G 1111
Fulton, R A 1601
Fulton, R W 809
Furman, D P 1343
Furniss, M M 63
64, 1109, 1117
Furr, R E 1160
Futrell, M C 1725
Fye, R E 1908
Fye, R L 387
388
Gaddis, C H 1699
Gaede, S E 1062
Gahan, J 8 399
1655
Gaines, T B 1582
1602, 1846
Gallegly, M E 1792
Gallun, R L 1118
Gans, G 602
Garber, J D 783
Garber, M J 587
1583
Garber, R H 864
Gard, L N 1461
Gardiner, 8 O C 353
Gardiner, L M 1978
Gardner, W S 1017
Garrett, W N 810
1740
Garriss, H R 850
Gasiorkiewicz, E C 811
1741
Gasser, J K R 1410
Gast, R T 65
66, 389
Gaston, L K 605
Gegering, Q A 390
Genung, W G 1533
George, 8 W 391
George, D A 1462
George, M 1826
Gerberg, E J 392
Gerhardt, P D 161
Gerling, D 393
1119
Gertler, S I 295
394, 646
Gerwitz, D L 812
Ghent, A W 67
Giang, P A 1463
1464
Gibson, H C 514
Gibson, K E 1909
Gichhorn, J L 772
Gifford, J R 395
Gilbert, 8 L 1827
Gilbert, I H 394
Gillenwater, H 8 1388
Gillham, E M 1979
Gilmer, R M 813
814
Gilmore, J E 343
396
Glancy, 8 M 559
Glasgow, J P 68
397
Glass, E H 398
1187
Glick, P A 1120
1910
Globus, O A 1848
Goheen, A C 840
Golmerac, W L 1387
Gold, A H 815
Gomulinski, M S 1893
Gonzalez, D 1217
1677
Gordon, C C 816
Gordon, C F 1465
Gordon, H T 1593
Gorzycki, L J 1219
1680
Gostick, K G 1911
Goth, R W 817
Gouck, H K 387
394, 399, 400
401, 1912
Gould, G E 1121
Gouiding, R L 418
1603
Graham, H M 69
70, 379, 402
552, 556, 1110

Graham, J H
1910, 1913
Graham, J H 752
818, 819, 820
Graham, J R 1466
Graham, O H 91
403, 404, 426
428, 533, 1338
1340, 1345, 1394
1681
Graig, R 374
Granett, P 1344
1608
Grant, B R 821
Grant, T J 822
897
Graupner, A J 1833
Graves, J B 71
405, 406
Green Jr, R J 1411
Green, G W 72
73, 407
Green, H B 408
Green, N 295
646, 687
Green, R J 804
Greene, G L 409
1122
Gregory, B G 1061
Gregory, B R 1711
Gregory, G F 1771
Grigarick, A A 410
Grimm, G R 1290
Grindeland, R 958
Grobler, J H 74
411
Grogan, R G 856
Grossman, P D 426
Groves, K 1834
Gryrisco, G G 1114
Guengerich, H W 893
Guineacorn (Sorghum 75
Guill, R 1537
Gunderson, W E 11
Gunther, F A 1509
Gutenmann, N H 1412
Gutenmann, W H 1427
1467, 1468, 1469
1473
Guthrie, F E 1211
1437, 1470
Guthrie, J W 823
Gutnick, D L 1537
Guyer, G 1710
Guzman N, J 824
Gyrisco, G G 81
119, 178, 340
341, 566, 1064
1115, 1471, 1473
1870, 1894
Haag, H B 1635
Haasis, F A 825
Hacskaylo, J 1165
1742
Hadden, S J 872
Haenlein, G F W 135
Haenseler, C M 781
Hagedorn, D J 780
Hagen, A F 412
1604
Hagen, K S 1057
Hagley, A C 1605
Hagley, E A C 1914
Haglund, W A 1743
Haguwitz, R 1834
Haines, L D 1465
Hair, J A 413
700, 1915
Hake, C L 1644
Hale, R L 213
1123
Halisky, P M 836
976
Hall, I M 367
604, 826, 983
1147, 1293, 1691
Hall, N W 1948
Hall, W C 1772
1851
Hall, W E 1579
1606
Hallett, J T 1897
Halmos, S 739
783
Hamilton, D N 598
Hamilton, E W 414
Hamilton, K C 687
Hamilton, R H 1744
Hamilton, R 1 809
827
Hamman, P J 1220
Hammonds, R O 76
Hams, A F 1820
Hamstead, E O 415
Hanec, W 77
Hanna, R L 1058
1255, 1607
Hanney, P W 78
Hansell, R 1 C 1596
Hansen, A J 828
Hansen, E J 535
Hansens, E J 416
1344, 1608
Hansing, E D 882
Hanson, C H 661
Hanson, E W 769
Hanson, 1 W 796
Hanson, L E 1472
Harcourt, D G 79
80, 1124
Hardee, D D 81
1115, 1473, 1916
Harding, J A 417
1125, 1126
Hardman, R M 402
Hardwick, D F 82
Hare, W W 829
1475, 1886, 1918
1920, 1921
Harein, P K 1388
1389, 1474, 1697
Harein, Phillip K 473
Harendorf, K 1917
Hargett, L T 418
Harman, D M 1127
Harpaz, 1 868
Harper, A M 83
419, 1128
Harrel, E A 1918
Harrell, E 1919
Harrell, E A 1475
1884, 1886, 1920
1921
Harrendorf, K 1922
Harries, F H 420
421, 422
Harris Jr, E D 423
Harris, C R 84
424, 1413
Harris, E J 625
634
Harris, F A 85
Harris, R L 425
426, 427, 428
1609, 1681
Harrison, E P 1129
Harrison, M B 1294
Harrison, M C 1319
Hart, H 892
Hart, L 1610
Hart, W G 1923
Hartmann, H 1880
Hartmann, H T 1537
Hartsock, J G 471
Harvey, T L 1328
Harwood, R F 1808
Hashimoto, S 1686
Hassan, S 372
Hastings, A R 463
Hatchett, J H 1130
1131, 1613, 1614
Hathaway, D O 429
Havens, R 1476
Hawkins, W B 1835
Hawthorn, J 1737
Hayes Jr, W J 1582
1611
Haynes, J W 430
Hays, K L 1971
Hays, S 1612
Hays, S B 431
432, 477, 1924
1925
Hebert, T T 920
Hedin, P A 430
433
Hedlin, A F 86
87
Heidrick, L E 824
Heishmann, J O 1337
Helton, A W 830
Henderson, C A 1103
Henderson, C F 1130
1131, 1132, 1613
1614, 1926
1561
Hendrick, R D 831
Hendrix Jr, F F 832
Henneberry, T J 239
434, 435, 436
437, 475, 514
659, 701, 1133
1615, 1623, 1693
Hennessy, D J 1616
1823
Hennigar, G R 1635
Henson, L 784
785, 833
Heotis, J P 1449
Herbert, H J 88
Herne, D C 1202
Herne, D H C 1209
1617
Herridge, E A 1745
Hetrick, L A 438
Heuberger, J W 883
Hewlett, P S 1911
Hickey, K D 1095
Highland, H A 1477
Hightower, B G 89
90, 91, 266
Hildahl, V 158
Hildebrand, E M 834
Hill, A C 1746
Hill, S D 1699
Hills, F J 1747
Hilton, B D 1854
1927
Hilton, H W 1414
Himelick, E B 915
Hintz, A M 391
Hintz, S D 141
Hitchcock, J D 439
Hitchon, J L 84
Hobbs, E L 835
Hobbs, G A 92
440
Hocking, B 1928
Hodges, C S 825
850
Hodges, J W 1134
Hodson, A C 1156
Hoffman, J D 441
Hoffman, R A 1345
1879
Hokama, Y 1631
Holbrook, F R 1520
Holdanay, F G 1084
Holdaway, F G 1116
Holland, R F 1471
1473
Hollingsworth, J P 442
Hollis, J P 1295
1296
Holman, J R 93
Holmes, F W 1618
Holmes, N D 1135
1136, 1619
Holowczak, J 1748
Holston Jr, J T 719
Holton, C S 836
852, 1752
Homer, R F 1620
Homiak, J J 1577
Hood, J R 929
Hooker, W J 742
Hooper, G H S 443
Hoopingarner, R 707
Hoover, D L 444
Hope, G W 1621
Hopkins, A R 526
1137
Hopkins, D E 703
Hopkins, T L 445
446
Hopping, G R 94
95, 96, 97
Horn, N L 1039
Hornig, E O 1831
Horsfall, J G 1749
Horsfall, W R 1929
Hosny, A H 372
Hough, W S 98
447
House, V S 1560
1561
Houston, B R 904
Houston, D R 837
Howden, H F 99
Howe, W L 704
Howell, D E 668
Hower, A A 1330
Howitt, A J 1297
Howland, A F 659
1622, 1623
Hoyt, S C 1138
Huber, W G 1624
Huddleston, E W 1471
1870
Huddleston, P 462
Huddleston, P M 1916
Hudon, M 1139
Huelin, F E 838
1085
Huffaker, C B 100
1320
Huffman, C W 1625
Huger, A 479
1930
Huggans, J L 101
Hughes Jr., R E 1478
Hughes, J C 839
Hughes, P R 1931
Hughes, R B 1479
Huime, A C 1373
Humphrey, W A 1146
1627
Hunt, L M 1481
Hunter, R E 1931
Hurlock, E T 1140
Hurney, J 1687
Hutchins, P C 1292
Hutchinson, M T 840
Ignoffo, C 585
Ingram, W R 1141
Isaak, A 1142
Isakson, O W 487
Isler, D A 1951
Ivanoff, S S 841
842
Ives, G H 102
Ives, W G H 103
104
Ivey, M C 1446
1447
Iwanaga, S 1660
Jack, 1 D 1174
Jacklin, S W 448
1480
Jackson, C G 1679
Jackson, C R 843
Jackson, J B 1481
1717
Jackson, R D 449
1676
Jacobsen, L A 450
Jacobson, L A 451
Jacobson, N L 720
Jaffe, M J 806
James, H G 27
105
James, W 526
Jameson, H R 1143
Jamnback, H 1626
1932
Jantz, O K 452
Jaques, R P 844
1144
Jarvis, J L 1145
1176
Jaworski, E G 480
1750

Jay Jr, E G 1346
Jay, E G 1477
Jaycox, E R 453
Jefferson, R N 1146
1147, 1627
Jenkins, G 1730
Jenkins, J N 460
462, 1148, 1180
1182, 1183, 1184
Jensen, F 1149
Jensen, H J 1298
Jepson, L R 1628
Jesser, M J 1628
Jester, C W 598
Johnsey, R L 452
Johnson Jr, J C 1432
Johnson, C 454
Johnson, O P 1482
Johnson, E R 1700
1864
Johnson, H W 845
Johnson, N E 86
1150, 1629, 1630
Johnson, P E 1072
Johnson, R E 771
772
Johnson, V A 463
1699
Jones, Henry A 1036
Jones, J P 845
1006
Jones, P A 455
456
Jones, R H 1609
Jones, S L 1680
Josephson, L M 1071
1151
Judd, W W 106
107, 108
Judson, C L 1631
Jurinak, J J 1836
Kaasenbrood, P J C 1837
Kae, S M 1067
Kahn, S 1512
Kahn, R P 846
Kaloostian, G H 847
Kamon, E 1632
Kane, P F 1838
Kantack, E J 880
1205
Kantner, T R 1504
Kastelic, J 1789
Kasting, R 146
457, 458
Kattouias, M E 109
Kauer, R C 1815
Kawanashi, C Y 909
Keane, F W L 848
869, 870, 871
Kearby, W H 110
459
Kearns, C W 1569
Keaster, A J 216
1917
Keenan, G I 1473
Keener, P O 849
Kehr, W R 487
1145
Keitt, G W 1018
1798
Keilen, W R 111
Keiler, J C 460
461, 462, 463
464, 638, 1180
1182
Keilogg, F E 465
Keiman, A 729
850, 878, 1047
Keisheimer, E G 1533
Keiton, L A 112
Kempster, R H 1877
Kenaga, E E 1815
Kendrick Jr, J B 933
1751
Kendrick, E L 851
852, 1752
Kennedy, S W 853
1753
Kennedy, E E 1483
Kenten, R H 854
Kerr, T W 1508
Kerrich, G J 113
Kettie, O S 114
Kevan, O K M 115
233, 234, 512
Khan, A A 116
466
Kidder, H E 364
Kido, H 1149
1839
Kieckhefer, R W 467
Kiigemagi 1526
Kiigemagi, U 1484
Kiigore, W W 468
469, 557
Kiilough, R A 470
471
Kiipatrick, J W 1633
Kiipatrick, R A 855
Kimbie, K A 856
Kimura, Y 1485
Kindler, S O 141
King, C G 1486
King, E W 93
1933
King, T H 853
943, 1743
Kingsland, G C 857
Kinzer, H G 1130
1131, 1132, 1613
1614
Kirkland, J J 1487
Kirkpatrick R L 472
Kirkpatrick, M E 1505
Kirkpatrick, R L 473
1934
Kirpan, J 1653
Kishaba, A N 434
474, 475, 476
1615
Kissam, J B 477
Kitajima, E W 989
Kiarman, W L 1840
Kiein, H C 1807
Kiine, O M 858
1754
Klisiewicz, J M 859
Kiostermeyer, E C 948
Kiotsas, K 1527
Kiotz, L J 788
860
Knapp, F W 445
1347, 1348, 1634
Knerer, G 117
Knight, K L 1349
Knipiing, E F 702
Knorr, L C 774
Knowies, C O 1350
Knutson, L V 118
Kobiitsky, L 1417
Koch, E J 787
Koehler C S 109
Koehler, C S 119
120, 1152
Kohler, P H 1351
Kolbezen, M J 795
1935
Komatsu, G H 1359
Konicek, O E 1298
Koons, J R 1841
1869
Kopp, L E 771
Kozuma, T T 634
Kraemer, P 121
1153
Kramer, A 1488
Kramer, C L 927
Kramer, J P 1755
Krantz, G W 1960
Krause, G F 1389
Kreasky, J B 478
Krebiii, R G 861
Kress, L M 1450
Krieg, A 479
Kring, J B 1936
Krombein, K V 76
Kropf, D H 1423
Krueger, H R 480
Krupka, L R 1756
Krusberg, L R 1299
1300
Krywienczyk, J 481
482
Kuc, J 821
1748
Kuchar, E J 1527
Kuhn, C W 862
Kuitert, L C 1533
Kuiman, H M 188
483, 1127, 1154
1155, 1156, 1157
Kuip, L A 1158
Kuntz, J E 837
Kurtz, E A 1215
1542
Kutschinski, A H 1489
La Croix, E A S 713
LaBerge, W E 487
LaBrecque, G C 387
534, 542, 1327
1439, 1636
LaBreque, G C 388
LaChance, L E 703
Ladd Jr, T L 484
485, 1757
LaDue, J P 587
Lafever, H M 1183
Lafever, H N 1148
1184
Lafrance, J 122
Lahr, K A 728
Lahren, C K 1906
Laird Jr, E F 800
Laksesvela, B 1323
Lai, S B 988
Lambe, R C 1745
Lamey, H A 831
889
Lammers, G W 1937
Landin, M 66
Landis, B J 179
Lange, W H 863
Langham, W H 1842
Langiois, B E 1490
Langston, J M 1103
LaPidus, J B 1159
Larsen, J R 486
Larson, J L 67
Larson, K H 1781
Larson, P S 1635
Laster, M L 129
1160
Lau, N E 1301
Laurence, B R 123
Lavigne, R J 1353
Lawson, F R 441
Layton Jr, W M 1564
Lazer, L 1843
Leach, L O 864
Leasure, J K 1844
Leben, C 1018
1798, 1938
Lefkovitch, L P 575
Leggate, B M 488
Legner, E F 124
125, 165, 489
1161, 1162, 1939
Leigh, T F 297
1758, 1931
Leinbach, L R 1491
Lembright, H W 1355
Lemin, A J 1759
Leonard, David E 1163
Leone, I A 781
LeRoux, E J 170
Lesher, G Y 1643
Leski, R A 490
Letey Jr, J 1314
Leuck, D B 76
126, 491, 1431
1432
Levin, M D 1185
Lewallen, L L 523
1637
Lewis, F B 339
Lewis, G D 1302
Lewis, K H 1563
Lewis, L F 492
1352
Lewis, W J 127
663
Liang, T T 461
Libby, J L 1199
Lichtenstein, E P 1164
1492, 1760, 1761
Liliy, C E 1128
Lindberg, G O 865
Linder, P J 1762
Lindgren, D E 1237
Lindgren, D L 662
1390, 1398, 1522
1859
Lindgren, P O 1584
Lindquist, O A 442
697, 1093, 1165
1219, 1560, 1561
1679
Lindquist, E F 128
Lindstroem, O 1763
Linegar, C R 1653
Ling, K C 803
Lingappa, B T 1764
Lingappa, Y 1765
Lingren, P O 493
Link, R P 1624
Linscott, D L 1766
Lipa, J J 111
494
Lippold, O C 265
Lippold, P C 495
1940
Liscombe, E A R 1391
Lisk, O J 1412
1427, 1467, 1468
1469, 1471, 1473
1493, 1524, 1525
1870
Liska, B J 1490
Litrell, R H 1767
Littau, V C 866
Littie, H N 1701
Littie, T M 206
Littieford, M F 1638
Liu, H P 731
Lloyd, E P 85
129, 496, 497
522, 1166, 1883
Lloyd, G A 1415
Loan, C C 130
Lockwood, J L 1764
1765
Loebenstein, G 867
868
Loegering, W A 1791
Loegering, W Q 945
Lofgren, C S 280
498, 1639, 1655
Lohr, A D 1824
Long, W H 693
1167
Lopez, O, F 1392
Lord, F T 1168
Lott, T B 869
870, 871
Louloudes, S J 499
Lowen, W K 1448
Lowry, W L 500
501, 502
Lubatti, O F 1726
Lucas, G B 829
Luce, E N 1496
1497
Luckmann, W H 1191
Ludwig, P O 1355
1357, 1860, 1862
1863, 1970
Luke, H H 872
873, 874
Lukefahr M J 131
Lukefahr, M J 301
503, 1169, 1170
1171, 1640
Lukens, R J 875
Lukezic, F L 876
Luttrell, E S 877
Lydin, L V 429
Lyon, H H 1941
Lyon, W F 1494
Lyons, L A 132
133

Lyons, T 1065
MacCreary, O 135 136
MacCuaig, R O 505
MacDonald, W E 1370
MacDougall, D 1838
Mace, M E 739
Macfarlane, J J 504
MacGillivray, M E 137 1172
Mackauer, M J P 134
MacKay, M R 138 139, 238, 506
Mackensen, O 406
MacLeod, O M 411 507
Madsen, H F 140 1173, 1174
Maelzer, O A 5D8
Magor, R O 373
Mai, W F 1287 1303, 1941
Maibach, H I 116 466
Mailloux, M 509
Maine, E C 878
Maitlen, J C 1495
Maksymluk, B 1641 1845, 1942, 1951
Malina, M A 1501
Mangat, B S 510
Manglitz, G R 141 476, 704, 1175 1176
Mankau, R 1304
Mankin, C J 724 1721
Mankowsky, R A 1070
Mann H O 1446
Mann, A J 871
Mann, H O 1447
Mansingh, A 511
Manson G F 1177
Manson, G F 84
Maramorosch, K 866 879
March R B 1830
Maretzki, A N 1498
Marquardt, R P 1496 1497
Marsh, G A 627
Marshall, V G 512
Marth, P C 1768 1769
Martignoni, M E 494 513
Martin, O F 131 294, 402, 503 556, 584, 1169 1171, 1640, 1913
Martin, J L 142
Martin, P E 1836
Martin, W J 880 881, 1296
Martinez, A L 1034
Martini, A 1443
Mason, H C 239 514, 1943
Mason, W R 143
Mather, S C 882
Mathis, W 515
Matteson, J W 1178 1642, 1944, 1945
Mattson, A M 1846
Maw, M G 1946
Maxwell, C W 1179
Maxwell, F G 460 462, 1148, 1180 1181, 1182, 1183
Maxwell, H G 1184
Mayer, M S 516
Mazuranich, P C 1947
Mc Phaic, M 1392
McAllan, J W 548 1988
McAlpine, V F 144
McArdle, F J 1498
McCabe, P J 484
McCain, A H 1770 1782
McCain, F S 1105 1186
McCalley, N F 863 1383
McCay, C F 1499
McChesney, E W 1643
McClanahan, J R 1177
McClanahan, R J 145 517
McClellan, E S 357
McClendon, J H 883
McCollister, O O 1644 1670, 1709
McCombs, C L 1804
McCormick, W J 1077
Mccoy, J R 497
McCrone, J D 1645
McCrum, R C 884
McDonald, P 1785 1786
McDonald, S 450 1619, 1948
Mcdonough, J L 339
McEwen, F L 705 978, 1092, 1187
McFadden, L A 885
McFadden, M W 518
McGarr, R L 1188
McGinnis, A J 146 457, 458
McGough, J M 294
McGovern, T P 296 519
McGovern, W L 436 437
McGregor, H E 1393
Mcgregor, S E 1185
McGregor, T 1646
McGuffin, W C 147
McGuire, J U 889
McIntosh, D L 1265
McKeen, C O 903
McKinley, W P 1425
McKinstry, O M 470
McLean, D L 886
McLean, O M 887 1036
McMarlin, J R 757
McMeekin, D 888
McMillan, W W 1243 1975
McMillian, W W 889
McMullen, L H 148
McMurtry, J A 520
McOnie, K C 999
McRitchie, J J 890
McVey, O 1012
McWhorter, C G 719
Meade, A S 561
Mechalas, S J 1901
Medler, J T 36 149, 176, 467 1905
Medley, J G 521 1341, 1394
Meeks Jr, R A 522
Mees, G C 1620
Meifert, D W 399 401, 1439, 1636 1803
Meikle, R W 1847, 1848
Meisch, M V 15D 122D
Melching, J S 1771
Mengie, D C 523
Menn, J J 1849 1897
Menzel, D B 1852
Menzel, R G 1790
Menzer, R E 1426 1500, 1507
Menzies, J D 816
Meredith, D S 891
Merkl, M E 129 496, 522, 563 1166, 1189, 12D1
Metcalf, R L 1218
16D0, 1647, 1648
1649, 1650, 1825
1829, 1830, 1831
1832, 1850
Meyer, C F 1501
Meyer, J R 1189
Micks, O W 541
Middleton, J T 1583
Miles, J R W 1177
Miller, C O F 151
Miller, C S 1772 1851
Miller, C W 892 1719
Miller, H N 911
Miller, L P 1773 1774
Miller, M C 1518
Miller, S 524 560
Miller, V L 1485
Millers I 250
Millikan, O F 893 1728
Mills, R S 1949
Milne, A 525
Milstead, J E 513
Miner, O 1696
Minton, E S 1305
Mirocha, C J 894 895
Mishanec, W 977
Miskus, R 374 1852
Misra, U S 26
Mistric Jr, W J 1190
Mistric, W J 1651
Mitchell, E S 462 1916
Mitchell, E R 526 1190, 1651
Mitchell, H C 1896
Mitchell, H L 1787
Mitchell, J W 1762 1768
Mitchell, W C 625 634
Mitchell, W G 1428
Mitsul, T 527
Mittler, T E 1652
Miyashita, D 519
Miyashita, O H 295 296
Modrey, M G 1498
Moe, R A 1653
Moens, P S 706
Moffatt, J S 1853
Moffitt, H R 282
Monson, A M 1775
Montgomery, M L 1776
Montoya, E 1950
Mook, L J 152
Mooney, R P 1502
Moore III, s 1191
Moore, A O 1845 1951
Moore, L D 779
Moorhead, E L 726 731, 1777
Morehart, A L 1654
Moreira, S 896 897, 950, 964 965, 966, 967 968
Morey, O O 872
Morgan, D G 1760
Morgan, L 1612
Morgan, M E 1733
Morgan, N O 528 529, 530, 531 532, 533
Morgan, P B 534
Morgareidge, K 1503 1662
Morishita, F S 1147 1627
Morris, A P 535
Morris, C L 153
Morris, K R S 1952
Morris, R F 154 155, 156, 186
Morrison, F O 509
Morrols, M G 361
Mortenson, E W 685
Morton, D J 898 899
Moseman, J G 900 901, 902
Mount, G A 536 1655
Mountain, W S 903
Moye, W C 1579
Mueider, W W 1816
Mueller, C H 1492 1760
Mueller, K E 904
Mueller, W C 905
Mulla, M 1656
Mulla, M S 537 538, 539, 540 714
Muller, A 1778
Muma, M M 31
Mumma, R O 1504
Munnecke, D E 906 907
Munroe, E 157
Murakishi, H H 908
Murcio Velasco, J F 1392
Murphy, E F 1488 1505
Murphy, H C 958 1012
Murphy, M R V 541
Murphy, R T 1428 1459, 1506
Murthy, G K 1563
Murvosh, C M 542
Musgrove, C H 1192
Musick, G J 1891
Myers, R S 1365
Myrdal, G R 1492
Naber, E C 1364
Naegele, J A 568
Nagasawa, S 543
Nair III, j H 1566
Nairn, L O 104 158
Nakagawa, S 1193
Nakatsugawa, T 544
Naibandov, O 1779
Namba, R 909
Narvaes, I 760
Nash, R R 545
Nash, S M 910
Natour, R M 911
Nayudu, M V 912 913
Neal, O C 914
Neely, O 915
Neff, O L 546
Neilson, N M 547
Nelson, W T A 548
Neiswander, R S 1406
Nelson, E L 695
Nelson, K A 1507
Nelson, P E 916
Nelson, R R 917 918, 919, 92D 951, 1780
Neri, L 1657
Nethery, A 707
Nettles Jr, W C 549 1544
Newhall, A G 979
Newhall, W F 1856
Newsom, L D 1246
Newson, L D 778
Newton, J R 569 709
Newton, R C 820 1194
Nichoils, C F 655 1953, 1954
Nichols, C W 921 1032
Nickie, W R 1306
Nielsen, L W 1374
Nielson, M W 1195 1196
Niemczyk, H D 145 55D, 551, 1658 1955

Nimmo, A P 159
Nishita, H 1781
Noble, L W 160
197, 552, 1082
1235
Noble, M O 1111
Noble, R C 1324
Norgren, R L 1719
Norie, L W 1170
Norris Jr, O M 1088
Norris Jr, M 286
Norris, M 553
Norris, M V 1527
Norwood, B L 661
Nottingham, P M 1325
Novotny, H M 1308
Nowosielski, J W 568
Nutting, W L 161
Nyland, G 922
923
O Bannon, J H 1307
1309
O Brien, R O 351
658, 1451, 1718
1854, 1867, 1927
O Neil, K 162
Oatman, E R 124
125, 163, 164
165, 166, 1161
1162, 1197, 1198
1199
OOell, T M 554
Oehme, F W 1659
Oertel, E 167
Oertel, J C 1966
Ogawa, J M 924
1722, 1782
Oglesby, W T 1365
Ohinata, K 519
Oliveira a R 989
Oliver, A O 168
Oliver, W N 934
Olney, C E 1508
Olsen, C M 1874
Olson, E O 925
Omori, T 1660
Onsager, J A 1956
Orlob, G B 926
Orr, G E 197
Orwoll, E F 1466
Osborn, A W 1957
Oser, B L 1661
1662
Oser, M 1661
Osgood Jr, E A 169
Osmani, M H 576
Ostby, P C 1711
Ott, O E 1509
Ouye, M T 402
500, 555, 556
Overby, L R 1510
1663, 1664
Owens, R G 1308
Pack, M R 1746
Pady, S M 927
Painter, R B 468
Painter, R H 610
1142, 1181, 1268
Painter, R R 469
557
Palm, P E 1566
Palmer, H C 1416
Palmiter, O H 1095
Palmitter, O H 1407
Paiti, J 1029
Papavizas, G C 1783
1784
Pappelis, A J 928
Paradis, R O 170
Parencia Jr, C R 171
172, 1200, 1585
Parish, J C 1665
1666
Parke, D V 1810
Parmeter Jr, J R 929
Parnas, I 1813
Parrish, D W 558
Parrott, W L 1180
Parsons, E C 1179
Pasarela, N R 1502
1534
Passos, O S 930
Paszek, E C 463
Patana, R 1679
Patchett, G G 1430
1511, 1855
Patel, C C 1858
Patil, S S 931
932
Patino, G 1053
Patrick, R 1856
Patterson, R A 1667
Patterson, R S 559
Patton, R F 861
Paulus, A O 730
933
Pawlik, J 1668
Paylor, R A L 1450
Paynter, O E 1669
1670
Peachey, J E 1410
Peadt, R E 486
Pearce, G W 1846
Pease, A L 1487
Pease, H L 1448
Peay, W E 934
Pechuman, L L 173
Peiletier, E N 1416
Pennel, J T 1652
Penny, N O 217
Perimmer, T R 1170
Perry, A S 524
560, 1671
Perry, Bruce A 1036
Perry, W 1512
Person, L H 1046
Peters, D C 348
449
Peters, L L 141
Petersen, L J 935
Peterson, A G 561
Peterson, O 562
Peterson, L G 486
Peterson, L K 1135
1136, 1619
Peterson, M H 1865
Petty, H B 1191
Pfadt, R E 1353
1672
Pfahler, P L 873
Pfrimmer, T R 563
1201
Phillco, W W 597
Phillippe, M R 1797
Phillips, J H H 174
1202
Phillips, M 1477
Pickard, L S 224
1551
Pickens, L G 708
Pickford 175
Pickford, R 193
564, 1203
Pienkowski, R L 176
Pierce, O A 1570
Pilson, R D 488
Pimentel, O 177
Pine, T S 1204
Pirone, T P 936
Pitre Jr, H N 1205
Pitts, C W 1360
Plakidas, A G 1720
Plapp Jr, F W 565
Pless, C O 1933
Poinar Jr, G O 178
566
Pointing, P J 73
567
Polcik, B 568
Polen, P B 1501
Pollard, H N 847
Pond, D D 1206
Poorbaugh, J H 267
Porter, C 1512
Porter, C A 937
Porter, F M 1012
Porter, J E 1386
Potter, C 1979
Pound, G S 859
936, 984
Powell, B O 854
Powell, O 1788
Powell, O M 179
1207
Powell, H F 1900
Powell, J M 1904
Powers Jr, H R 1791
Presley, J T 1041
Press Jr, A F 1395
Pressey, R 720
Price, R O 180
181
Price, R W 1558
Price, W C 938
Prins, G 1955
Prokopy, R J 1958
Proverbs, M D 569
709
Provvidenti, R 977
978
Pujol, A R 939
940
Purdy, L H 941
Putala, E C 1701
Putman, W L 570
1202, 1208, 1209
1959
Putnam, L G 571
Puttler, B 34
49, 182, 572
Qasem, S A 1375
Quraishi, M S 573
574
Qurishi, M S 575
Quarterman, K O 715
Quattrone Jr, J J 1807
Quigley, G O 1354
Quinn, D O 365
Quinton, R J 1210
Quraishi, M S 576
Qureshi, A H 183
Raabe, R O 832
942
Rabb, R L 656
1211
Race, S R 577
1212
Radcliffe, E B 1213
1214
Radeleff, R O 1367
1446, 1447, 1481
1513, 1717
Radinovsky, S 1960
Radley, M 1853
Radomski, J 1587
Radomski, J L 1370
Rahman, H 1785
1786
Rahmati, H S 658
Rainwater, C F 171
Rajadhyaksha, N 647
Rajinder, S S 578
Ramirez, J S 1787
Rammer, I A 1215
1542, 1673
Ramsey, G B 1378
Randall, A P 1674
Randell, R L 184
Randolph, N M 150
686, 1216
Raniere, L C 1025
Rao, S B 1961
Rappaport, I 1049
Ratcliffe, R H 1675
Raun, E A 1676
Rawlins, W A 1217
1677, 1757
Ray, J O 54
377
Raybould, J N 185
Raymer, W B 786
Read, O C 186
187, 579
Rebois, R V 1290
Redemann, C T 1803
Redfern, R E 580
Rediske, J H 1630
Redner, J H 17
Reed, D K 581
Reed, J K 1933
Reed, J P 1301
Reeks, W A 158
Reeves, B G 1679
Reeves, E L 1043
Reich, K 1813
Reid Jr, W J 349
1091, 1094
Reid, R W 582
583
Reierson, O A 370
Reiling, T P 943
Reinhardt, J F 1788
Reinhart, J H 944
Renfro, B L 738
Revallier, L J 1837
Rexrode, C O 188
Reynolds, H T 1218
1850
Reynolds, H W 1307
1309
Rice, E E 1514
Rich, S 1749
Richards, W R 189
190, 191, 192
Richardson, C O 660
Richardson, H 1678
Richardson, H O 444
Richardson, H H 721
1396, 1402
Richardson, H P 673
Richardson, J 1009
Richardson, L R 1377
Richardson, L T 1857
Richmond, C A 333
556, 584, 585
Richter, E 1774
Ridgway, R L 586
1093, 1219, 1584
1679, 1680
Riegert, P W 175
193
Riehl, L A 587
1355, 1452
Riker, A J 1024
Riley, R C 1962
Riley, W D 273
274, 1545
Rimando, L C 194
Rinick Jr, H B 1087
Riordan, O F 681
Ristich, S S 1675
Rivera, C T 588
Rivers, G W 1220
Rivnay, E 195
Roan, C C 1515
Roane, C W 945
Robbins, J E 1432
Robbins, P 1512
Robbins, R C 1789
Robert, A L 946
947
Roberts Jr, H 1790
Roberts, J E 1417
Roberts, P A 1600
Roberts, R B 196
589
Roberts, R H 1356
1446, 1481, 1516
1681, 1682
Roberts, R J 1418
Robertson Jr, R S 948
Robertson, O T 160
197, 1082
Robertson, R L 323
Robinson, A G 198
199
Robinson, H 200
Robinson, R W 1092
Robison, R C 522
Roburn, J 1517
Rochow, W F 905
Rodin, J O 607
Rodriguez, D 949
Rodriguez, J G 590
1458
Rodriguez, J L 587
Rodriguez, O 950
Roessing, C 897
Rogers, T E 1365
Rogers, W E 951

Rogoff, W M

Rogoff, W M 13S1
Rohwer II, S A 1963
Rohwer, G G 1963
Roistacher, C N 9S2
Rollinson, W D S54
Rolston, L H 1221
Romney, E M 1781
Rosenberg, D Y 921
1032, 1033
Rosi, D 1643
Ross, A F 90S
9S3
Ross, E 13S9
1688, 1689
Ross, J P 1310
1311
Ross, M H 336
337
Rossettl, V 9S4
960
Roth, H 721
1396, 1402, 1678
Roth, Vincent D 1222
Rothrock, J W 783
Rouse, P 1221
Rousell, P G S91
Roussel, J S 40S
Rowan, S J 9SS
9S6
Rowe, V K 1644
1670
Rowell, J B 727
1791
Rubenstein, D. 1S38
Rubio, R E P S18
Rubis, D D 1013
Rudder, J D 1075
Rudinsky, J A 201
Ruggieri, G 9S7
Ruppel, R 1118
Ruppel, R F 1267
1964
Rusk, H W 14S8
Russell, F E 1683
Russell, J R 273
Russell, M P 1223
Sadanaga, K 9S8
Sadek, S E 1644
Sagawa, T S27
Saksena, K N 9S9
Salibe, A A 897
9S4, 960, 961
962, 963, 964
96S, 966, 967
968
Salt, R W S92
Sanchez Riviello, M 196S
Sanchez, F F 1684
Sanders, D P 1336
Sanford, K H 593
1224, 122S
Sano, H S27
Sans, W W 1177
Sartor, M H 1966
Sasser, J N 1284
Saunders, D S 202
203
Savage, E J 1792
Scales, A L 61S
Schaefers, G A 204
1226, 1227
Schaller, C W 900
969
Scharen, A L 970
Scharff, D K 13S7
13S8
Scharpf, R F 929
Schechter, M S 638
1463
Schecter, M S 1464
Scheffer, R P 971
Schein, R D 972
973
Schenck, N C 974
Schllllinger, J A 1228
Schlpper, I A 168S
Schlinger, E I 10S7
Schmidt, C D S29
S30
Schmidt, C H 3S0
Schmidt, F H S94
Schmiege, D C 20S
S9S
Schmitt, J B 617
Schmitthenner, A F 104S
Schnathorst, W C 97S
976
Schnelder, R 1S12
Schoenburg, R B 206
Schole, J 1440
Scholes, J F 1017
Schonbrod, R D S96
S97
Schonhorst, M H 687
1196
Schoof, H F S1S
1460, 1633
Schread, J C 1229
Schreck, C E 1912
Schroeder, W J 1S3
Schroeder, W T 977
978
Schulz, J T 1230
Schulz, K R 1492
1761
Schuster, M F 1231
Schwartz, P H S98
Sconyers, M C 1261
Scott, C B 1686
Scott, D B 207
Scott, R O 1967
Scotti, T 1S87
Scriven, G T S20
Scudder, G G E 208
Secrest, J D 1991
Secrest, J P 1990
Segall, R H 979
Selander, R B S99
Selhime, A G 31
Semel, M 67S
Sengupta, G C 1232
Seow, D H 1902
Sequeira, L 980
Sewell, W D 981
Shan, F R 1S18
Shands, H L 982
Shands, M K 600
Shands, W A 600
983, 1233
Shankaranarayana, M 18S8
Shankland, D L 474
Shanks Jr, C H 601
602, 603, 1234
Sharlfullah, M 299
Sharplin, J 209
210, 211
Shaw, C G 816
Shaw, F R 1S19
1520, 1687
Shaw, J G 196S
Sheehan, E T 301
Sheets, L W 241
242, 670, 671
672, 1263
Sheets, T J 1419
Shepherd, R J 984
Sher, S A 1312
Sherman, M 13S9
1684, 1688, 1689
Shewell, G E 212
Shiller, I 123S
Shipp, E 19S7
Shipp, O E 308
Shorey, H H 213
604, 60S, 606
1123, 1S21, 1690
1691, 1692
Shortino, T J 499
Showers, W B 831
Shriver, D 1133
1693
Shuitice, R W 1610
Slegel, A 98S
986
Siegel, M R 1793
Siemer, S R 1S42
Silberman, M S S61
Sili Jr., W H 773
Sili Jr, W H 9S9
987, 988
Silva, D M 989
Siiverman, W 990
991
Sliverstein, R M 607
Simanton, W A 1968
Simkover, H G 608
Simmonds, F J 1236
Simmons, H S S17
Simmons, P 1397
Simons, J N 609
992
Simons, M D 1012
Simpson, G W 600
983, 1233
Simpson, H R 694
Simpson, J H 1962
Simpson, K 178S
1786
Sims Jr, A C 993
Sinclair, J B 914
Sinclair, W B 1237
1398, 1S22, 18S9
Singh, S R 610
9S9
Sinha, R N 611
Sippell, W L 214
Sisler, H D 1SS9
Sisson, R L 140
Sitterly, W R 994
1969
Skaptason, J S 1360
Skoog, F E 1238
Skotland, C B 995
996
Sleesman, J P 1271
Smiley, J H 997
Smith Jr, B R 163S
Smith Jr, L W 198S
Smith Jr, W L 1288
Smith, A L 130S
Smith, C N S42
Smith, C T 1S19
1687
Smith, D B 1883
Smith, D N 612
Smith, D S 613
1619
Smith, D W 614
Smith, E H 1239
1S95, 1718
Smith, F F 448
1133, 1480
Smith, F G 928
Smith, G L 61S
1082
Smith, G N 1S23
1S30, 1794, 1816
1860, 1861, 1862
1863, 1970
Smith, J W 471
Smith, M A 1378
Smith, O E 616
Smith, P F 822
Smith, P W 1694
Smith, R H 21S
169S
Smith, R S 741
Smith, T E 998
Smith, W H 1373
Smlttle, B J 617
Smyth Jr., H F 1S6S
Smyth Jr, H F 1S66
Smythe, R V 618
Snapp, O I 1240
Snetsinger, R 1696
179S
Snideman, M L 367
Snoddy, E L 1971
Snow, J N 1972
Snow, J W 619
Snyder, W C 999
Soles, R L 1697
Soliman, S A 620
Solomon, J D 621
622
Solomon, M G 1823
Somers, G F 883
Sorensen, E L 1142
Sparks, A N 216
217, 300, 302
1973, 1974
Spishakoff, L M 623
Splttstoesser, C M 70S
1187
Sprague, G F 946
Sprenkel, R K 1330
Srivastava, B P 1S1S
St. John Jr, L E 1S24
1S2S
Stafford, E M 1149
1673, 1839
Stahmann, M A 1000
1736
Stairs, G R 624
Stakman, E C 94S
Staley, J M 737
Stali, R E 1001
1011
Standen, H 304
Stange, L A 1
Stannard Jr, L J 1241
Staples, R 726
Staples, R C 1002
Stark, R W 218
219, 221, 1242
Starks, K J 1003
1243, 197S
Starks, K J. 1244
Starr, H 1S26
Starr, R I 1321
Steere, R L 1004
Steib, R J 723
Steiner, L F 29S
296, S19, 625
Steinhauer, A L S88
124S, 1442
Steinhaus, E A 626
627, 628, 629
683
Steinhawer, A L 630
Stelier, W A 1S27
Stelzer, M J 631
Stemley, P G 220
Stemp, A R 1490
Stephen, W P 632
Stephens, C S 1313
Stephenson, B C 70
Sterling, W L 633
Stern, V M 1293
Sternburg, J 1698
1835
Stetner, L F 634
Stevens, R E 221
Stevenson, A B 222
63S
Stevenson, J H 1S28
1S90
Stewart, D 1848
Stewart, D M 945
Stewart, K 636
Stewart, K E 1112
Stokes, G W 833
997, 100S
Stolzy, L H 1314
Stone, L R 1S29
Stone, W J 1006
Stoner, A 23
Storm, L W 131S
Storm, N S 131S
Story, T P 83
Stratton, V S 1343
Straub, C P 1S63
Straube, L 1663
Strauss, W G 116
Streams, F A 223
Stretch, A W 1376
Strider, D L 1046
Stringer Jr, C E 280
498
Stringer, C E 1639
Strong, R G 637
Struble, F B 1280
Stuckey, B N 1818
Stultz, H T 1144
Subba-Rao, N S 1007
Sullivan, C R 237
Sullivan, W N 638
1601, 1699
Sun, Y 194
Sun, Y P 1700

Sun, Yun-Pei 1864
Sund, K A 1701
Sutherland, D J 1962
Suzuki, T 1660
Svec, H J 424
Svoboda, W A 1852
Swailes, G E 639, 1619
Swain, T 839
Swank, M G 1523
Swanson, M C 1246
Sweet, R C 1577
Sylvester, E S 13, 1008, 1009
Sylvester, J C 1865
Synhorst, S H 720
Taft, H M 641, 1137, 1178, 1642
Tafuri, F 1443
Tamashiro, M 642
Tammen, J 916
Tanada, Y 643
Tanaka, N 1976
Tantawy, A O 644
Tappan, W B 1247
Taschenberg, E F 1702
Tashiro, H 645, 646
Tauber, M 120
Taylor, C W 1349
Telford, H S 1400
Tellz-Ortiz, M 1010
Terranova, A C 1796
Terriere, L C 596, 597, 647, 1484, 1526, 1809
Terrill, J G 1563
Thatcher, R C 224
Thayer, P 1011
Theigs, B J 1523, 1860, 1862, 1863
Theiriault, R J 1865
Theis, T 1012, 1890
Thelsen, P 1409
Thiegs, B J 1530
Thomas Jr, A M 1866
Thomas Jr, C A 291
Thomas, B 1324
Thomas, C A 1013
Thomas, J B 1977, 1978
Thomas, R C 1759
Thomason, I J 1014
Thompson Jr, A C 433
Thompson, E 1586
Thompson, E G 1131, 1132
Thompson, H E 1015, 1316, 1326
Thompson, L S 1248
Thompson, R K 1900
Thompson, W L 1076
Thompson, W R 226, 227
Thomson, H M 648
Thorn, G D 1857
Thornberry, H H 1797
Thurston, H D 824
Thurston, R 1003, 1122, 1244, 1249
Tiews, J 1440
Tilton, E W 338, 649, 650, 651, 710, 1381
Tingle, F C 497
Tippins, H H 1250
Toba, H H 652
Tod, H 1420
Toimsoff, W J 864, 1016
Tombes, A S 545
Tomiyama, K 1000
Tomlinson Jr, W E 653, 1251, 1252
Tomlinson, T E 1620
Tomlinson, W E 1719
Tonn, R J 1361
Toppozada, A 372
Toung, M 1283
Townshend, B G 598
Trammel, K 1703, 1968
Transtrum, L G 1746
Treece, R E 654, 1267
Treon, J F 1573
Treshow, M 1017, 1746
Trevino, H A 794
Trimberger, G W 1471, 1473
Triplehorn, C A 1253, 1399
Trujillo, E E 999
Tsao, P 1018
Tsao, P H 1019
Tucker, H 687
Tucker, J O 1704
Tuff, D W 1400
Tuite, J 731, 1022
Tukey, H B 1799
Turnbull, A L 655
Turner Jr, E C 413, 700, 1362, 1363
Turner, A 1531
Turner, E C 1455
Turnipseed, G F 1401
Turnipseed, S G 656
Tusing, T 1599
Tusing, T W 1670
Tuttle, D M 38
Tweeddle, J C 1415
U. S. Dept. Of Agric 277
Uchida, T 658, 1867
Underwood, G R 228
Uritani, I 1000, 1800
Uritani, M 1800
Vail, P 1623
Vail, P V 659
Valcarce, A C 420
Valleia, M V F 1023
Van tarsdel, E P 1024
van den Berg, P J 1837
van den Bosch, R 4, 1057
Van Denburgh, R S 229, 230
van der Zwet, T 723
Van Gundy, S D 1019, 1021, 1314
Van Gunoy, S D 1020
van Middelem, C H 1421, 1533
Van Middleiem, C H 1532
Van Natta, D L 1331
van Sickle, G R 681
VanDenburgh, R S 661
Vanderplank, F L 231
Vanderzant, E S 546, 555, 660
Varney, E H 840, 1025
Varty, I W 232
Vaughan, E K 1026
Vaughn, E K 1027
Vernon, F 1868
Viadu, G B 1451
Vicari, G 1705
Vickery, V R 233, 234
Vincent, L E 662, 1390
Vinson, S B 663
Vockeroth, J R 235
Vogel, R 1028
Volcani, Z 1029
von Windeguth, D L 559
Wachtomi, E 1539
Waddell, C D 250
Wade, C V 13
Wadley, B N 1030
Wadsworth, D F 1031
Wagner, R E 370, 1903
Wagnon, H K 1032, 1033
Waites, R E 1421, 1533
Wakid, A W 644
Waldbauer, G P 664
Waldron, A C 1534
Walker Jr, J K 236, 665, 1607
Walker, J C 912, 913
Walker, J K 1255
Walker, J R 666
Walker, J T 526, 1317
Walker, K 1495
Walker, K C 1462
Wallace, A T 874
Wallace, D R 237
Wallace, J B 1362, 1363
Wallace, J M 1034
Wallace, L E 1238
Wallace, L W 1256
Walley, G S 238
Wallis, R L 667, 1257
Wallner, W E 1258, 1525
Walstrom, R J 141
Walter, E V 1259
Walther, B 1580
Walton, R R 636
Wang, M 1488
Ward, C H 1318
Ward, J 1979
Ware, G W 1364, 1586, 1796
Waree J H 1534
Wasserman, R H 1706
Wassom, C E 1268
Wasson, W D 1988
Watkins Jr, W C 1093, 1584
Watson, T F 1260, 1261
Watson, W M 945
Watt, D D 1707
Watt, K E F 1980, 1981, 1982
Watters, F L 1391
Wave, H E 239, 1262, 1983
Weathers, L G 1035
Weaver, J E 1708
Webb, B D 1377
Webb, F E 158
Webb, R E 1036
Weber, G F 768
Weber, P V V 1037
Weekman, G T 276, 1984
Weibel, R O 1072
Weidenbach, C P 1367, 1446
Weidhaas Jr, J A 1525
Weil, C S 1565, 1566, 1709
Weilson, W T A 240
Weinstein, L H 937
Weintraub, J 668
Weir Jr, R J 1669
Weir, R 1599
Welch, H E 187, 669
Wellington, W G 1873
Wells, A L 1710
Welso, S G 633
Welsh, M F 848
Wene, G P 11, 241, 242, 670, 671, 672, 1263
Werner, R A 1264
Wernham, C C 857, 1038
Wessel, R D 1406
Wesselman, H J 1841, 1869
Westdal, P H 673
Westigard, P H 140, 243, 1173
Westlake, W E 1495
Wharton, G W 344, 345
Wheatley, P E 674
Wheeler, H E 874
Whetstone, T M 1339, 1369
Whidden, R 767, 1290
White, J C 1039
White, J L 1404
White, R W 1452
Whitehead, M D 762
Whitehurst, W E 1870
Whitlan Jr, J T 1985
Whittig, L D 1801
Wickman B E 1986
Wickman, B E 244
Wiehe, P O 249
Wilbur, D A 220, 472
Wilcox, J 245, 1622
Wilcoxson, R D 817, 1740
Wilde, G 675
Wilde, W H A 246, 247, 1265
Wilder, O H M 1711
Wilder, W H 1637
Wildman, S G 1040
Wiles, A B 1041, 1042, 1802
Wiley, R C 1498, 1505
Wilheim, S 910
Wilkinson, A T S 676
Wilkinson, R C 677, 678
Wilks, J M 1043, 1266
Willard, J R 679
Williams, D J 248
Williams, E 1803
Williams, E B 733, 1748
Williams, H E 1033
Williams, J R 249
Williams, L E 1044, 1045
Williams, L F 762
Williams, M W 1712
Williams, R T 1810
Williamson, C E 1319
Wilsie, C P 720
Wilson, B H 317, 1365
Wilson, C W 1935
Wilson, E E 894, 895, 924
Wilson, E L 587, 1452
Wilson, F L 559
Wilson, G B 707
Wilson, L F 250, 251, 252, 680, 1987
Wilson, M 1267
Wilson, M C 474
Wimblery, J 1365
Winek, C L 1713
Winstead, N N 1046, 1047, 1804
Winton, M Y 1600, 1649, 1829, 1830, 1832
Wiseman, B R 1268
Wishart, G 681
Wistreich, G A 329, 682
Wittig, G 683
Wittner, S H 1799
Wolf, W W 471
Wolfe, A L 1465
Wolfenbarger, D A 684, 1126, 1269, 1270, 1271, 1714
Wolfenbarger, D O 253, 1269, 1272, 1273
Wolfenbarger, Da 1274

Womeldorf, D J

Womeldorf, D J 685
Wong, S R 254
Wongsiri, T 686
Wood Jr, E A 1275
Wood, D L 219
255, 1276
Wood, F A 240
1048, 1535
Wood, G A 1535
Wood, G W 256
1277, 1988
Wood, R 1454
Woodham, D W 1431
1432
Woodhouse, C A 1448
Woodrow, A W 687
Woods, F 1587
Woods, S G 1423
Woodside, M W 1566
Woolford, M H 1534
Wooltorton, L S C 1373
Workman, R B 688
Wray, C 689
Wray, D L 257
Wright, C G 258
1989
Wright, R C 1970
Wright, R H 386
465, 690, 691
Wright, R L 442
Wright, W R 1378
Wu, J 1049
Wunderlich, B W 1366
Wylie, H G 259
692
Yadav, R P 693
Yale Jr, J W 1686
Yamada, H 1800
Yamada, T 1193
Yamamoto, R T 664
1779
Yamamoto, Toshio 260
Yarwood, C E 1050
1051, 1052
Yeates, M N D B 505
Yeo, D 694
Yeomans, A H 1601
Yoder, P E 695
York, G T 616
York, George T 230
Young Jr, H C 1031
Young, H Y 1536
Young, J R 1715
1716, 1918, 1920
Young, R A 931
932
Young, R G 1812
Younger, R L 1366
1367, 1717
Yuen, Q H 1414
Yuill, J S 1990
1991
Yun, Y M 1964
Zanmeyer, W J 846
Zaumeyer, W J 1053
1054
Zeiders, K E 818
Zentmyer, G A 789
1055
Ziener, W H 696
1687
Zschintzsch, J 1718
Zuckerman, B M 1056
1719
Zummo, N 1720
Zweig, G 274
1537, 1538

(kansas Agricultural Experiment Station, Manhattan 17B7
A8 casco, Stockholm, Sweden 1763
Abbott Laboratories, Chicago, Iii.
Research And Development Division
Physical Chemistry Dept. 1843
Abbott Laboratories, Chicago, Iii.
Research Division
Biochemistry Research Dept. 1510
Abbott Laboratories, Chicago, Iii.
Research Division
Dept. Of Microbial Physiology 1865
Abbott Laboratories, North Chicago, Iii.
Biochemistry Research Dept. 1663 1664
Academy Of Sciences Of The Armenian SSR, erevan, USSR
Sector Of Microbiology
Laboratory Of General Microbiology And Antibiotics 263
Agricultural And Mechanical College Of Tex., College Station 665
Agricultural Experiment Station Of Auburn University
Dept. Of Botany And Plant Pathology 1403
Agricultural Experiment Station, Gainesville, Fla.
Plant Pathology Dept. 777
Agricultural Experiment Station, Garden City, Kans.
Garden City Branch 1097
Agricultural Experiment Station, Suwan, Korea 1379
Agricultural Research Council, Cambridge, England
Entomological Field Station
Unit Of Insect Physiology 353
Agricultural Research Division, Modesto, Calif.
Shell Development Company 1606 1864
Agricultural Research Service
Entomology Research Division 277
Agricultural Research Station, Beit Dagan-Rehovot Israel 1029
Agricultural Research Station, Rehovoth-beit Dagan, Israel 195
American Cyanamid Co., Princeton, N. J. 1534
American Cyanamid Co., Princeton, N. J.
Agricultural Division 1502
American Cyanamid Co., Princeton, N. J.
Agricultural Division
Metabolism Laboratory 1435
American Cyanamid Co., Princeton, N. J.
Agriculture Center 1456
American Cyanamid Co., Stamford, Conn.
Central Research Division 1527
American Cyanamid Co., Stamford, Conn.
Stamford Research Laboratories 1450
American Cyanamid Company, Pearl River, N.y.
Lederle Laboratories Division
Experimental Therapeutics Research
Dept. Of Experimental Pathology 1564
American Foundation For Tropical Medicine
Liberian Institute 1952
Anti-Locust Research Centre, London, S. W. 505
Arizona Agricultural Experiment Station, Tucson, Ariz. 734
Arizona State University
Dept. Of Zoology 1667
Armour Pharmaceutical Company, Kankakee, Ill. 1541
Auburn University
Agricultural Experiment Station 1105
Auburn University
Agricultural Experiment Station
Dept. Of Zoology-entomology 24 1079 1260 1665
Auburn University
Agricultural Experiment Station
Zoology-Entomology Dept. 1068 1499
Auburn University
Agriculture Experiment Station
Dept. Of Zoology-Entomology 1350
Auburn University
Zoology-entomology Dept 1925
Auburn University Agricultural Experiment Station 1261
Auburn University Agricultural Experiment Station. 1384
Auburn University Agricultural Experiment Station, Auburn 1453
Auburn University, Ala.
Agricultural Experiment Station 1186
Auburn University, Ala.
Agricultural Experiment Station
Zoology-entomology Dept. 1556
Auburn University, Ala.
Agricultural Research Station
Dept. Of Zoology And Entomology 305
Auburn University, Ala.
Dept. Of Animal Disease Research 1594
Auburn University, Alabama
Zoology-Entomology Dept. 288
Auburn University, Auburn, Alab.
Dept. Of Zoology-Entomology 1971
Auburn University, Auburn, Alabama
Dept. Of Zoology-entomology 1666
Banana Board Research Dept., Kingston, Jamaica, W. I. 891
Birbeck College, London, England
Dept Of Zoology 25
Boots Pure Drug Co. Ltd., Nottingham
Lenton Experimental Station 1517
Boots Pure Drug Co. Ltd., Nottingham
Research Dept. 1820
British Columbia Research Council, Vancouver 690
British Columbia Research Council, Vancouver, B. C. 691
British Columbia Research Council, Vancouver, Canada 386
British Columbia Research Council, Vancouver, Canada
Division Of Chemistry 465
British Schering Mfg. Laboratories, Ltd., Hazel Grove, Eng.
Analytical Dept. 1868
Brooke Army Medical Center, Fort Sam Houston, Tex.
Medical Field Service School 1646
Brunel College Of Technology, Acton, London 1B22
C.S.I.R.O., canberra, Australia
Division Of Entomology 1066
Cadbury Brothers Ltd., Bournville, England.
Chemists Dept. 1531
California Chemical Company, Toledo, Ohio
Ortho Division 1406
California Chemical Company, Whittier 1387
California Dept. Of Agriculture, Sacramento
Bureau Of Plant Pathology 1033
California State Department Of Public Health, Fresno
Bureau Of Vector Control 685
California State Dept. Of Public Health, Fresno
Bureau Of Vector Control 111 523
Campbell Soup Company, Riverton, N. J. 1037
Canada Agriculture Research Station, Lethbridge 112B
Canada Agriculture Research Station, Lethbridge
Entomology Section 450
Canada Agriculture Research Station, Lethbridge, Alberta
83 92 146 419 451 457 458 592 613 639 640 1135 1136 1619 194B
Canada Agriculture Research Station, Lethbridge, Alberta
Entomology Section 440
Canada Agriculture Research Station, Lethbridge, Alberta
Veterinary-Medical Entomology Section 668
Canada Agriculture Research Station, Saskatoon, Saskatchewan
Entomology Section 193 1203
Canada Agriculture Research Station, Summerland, B. C.
Plant Pathology Section 1266
Canada Agriculture, Fredericton, N. B.
Research Station
Entomology And Plant Pathology Section 1179
Canada Agriculture, London, Canada
Research Institute 311
Canada Agriculture, Ottawa, Ontario
Research Branch
Entomology Research Institute
Central Experimental Farm 64B
Canada Agriculture, Sault Ste. Marie, Ontario
Research Branch
Insect Pathology Research Institute 481 4B2 507
Canada Agriculture, Summerland, B. C.
Research Station 869 B70 B71
Canada Dept Of Agriculture, Saskatoon, Saskatchewan.
Research Branch
Research Service 14
Canada Dept. Of Agriculture
University sub-Post Office, London, Canada
Research Institute 140B
Canada Dept. Of Agriculture, Belleville, Ontario
Research Branch
Entomology Research Institute For Biological Control
134 259 272 312 669 681 1877 1953
Canada Dept. Of Agriculture, Belleville, Ontario
Research Branch
Research Inst. 655
Canada Dept. Of Agriculture, Belleville, Ontario
Research Branch
Research Institute 105 130 380 692 1946
Canada Dept. Of Agriculture, Belleville, Ontario
Research Institute
Research Branch 1954
Canada Dept. Of Agriculture, Charlottetown, P. E. I
Experimental Farm 186
Canada Dept. Of Agriculture, Chatham, Ontario

Entomology Laboratory B4 424 1413
Canada Dept. Of Agriculture, Chatham, Ontario
Research Branch
Entomology Laboratory 145 517 1955
Canada Dept. Of Agriculture, Fredericton, N. B.
Research Station 1535
Canada Dept. Of Agriculture, Fredericton, N. B.
Research Station
Entomology And Plant Pathology Section 54B
Canada Dept. Of Agriculture, Fredericton, N. B.
Research Station
Horticultural Crops Section 1206
Canada Dept. Of Agriculture, Fredericton, N. B.
Research Station
Horticulture Section 1277
Canada Dept. Of Agriculture, Fredericton, New Brunswick
Research Branch
Research Station
Entomology And Plant Pathology Section 13 137
1172
Canada Dept. Of Agriculture, Fredericton, New Brunswick
Research Station 256 19BB
Canada Dept. Of Agriculture, Harrow
Research Branch
Research Station 3B2
Canada Dept. Of Agriculture, Kentville, Nova Scotia 844
1224 1225 1621
Canada Dept. Of Agriculture, Kentville, Nova Scotia
Research Branch
Research Station 593
Canada Dept. Of Agriculture, Kentville, Nova Scotia
Research Station 240
Canada Dept. Of Agriculture, London, Ontario
Agricultural Research Institute 166B
Canada Dept. Of Agriculture, London, Ontario
Pesticide Research Institute 1575
Canada Dept. Of Agriculture, London, Ontario
Research Institute 1B3
Canada Dept. Of Agriculture, Ontario
Research Branch
Vineland Station
Entomology Laboratory 1209
Canada Dept. Of Agriculture, Ottawa
Entomology Research Institute 143 711
Canada Dept. Of Agriculture, Ottawa
Research Branch
Entomology Research Institute 27 79 B0
B2 99 139 144 151 157 1B9
1124
Canada Dept. Of Agriculture, Ottawa, Canada
Research Branch
Entomology Research Institute 15 235 506
Canada Dept. Of Agriculture, Ottawa, Ontario
Research Branch
Entomology Research Institute 2B 37 62
112 128 138 190 191 192 212
226 227 23B
Canada Dept. Of Agriculture, Saskatoon, Saskatchewan
Research Station 360 564 571
Canada Dept. Of Agriculture, St. Jean, Quebec
Research Branch
Research Station 122 1139
Canada Dept. Of Agriculture, St. John s West, Newfoundland
Research Branch
Experimental Farm 155
Canada Dept. Of Agriculture, St.-Jean, Quebec
Research Branch
Research Laboratory 170
Canada Dept. Of Agriculture, Summerland 1043
Canada Dept. Of Agriculture, Summerland, B. C.
Research Branch
Research Station 709 1174
Canada Dept. Of Agriculture, Summerland, B. C.
Research Station 1265
Canada Dept. Of Agriculture, Summerland, British Columbia
247
Canada Dept. Of Agriculture, Summerland, British Columbia
Research Branch
Research Station 246 569
Canada Dept. Of Agriculture, Vancouver, B. C.
Research Station 1111
Canada Dept. Of Agriculture, Vancouver, British Columbia
Research Station 676
Canada Dept. Of Agriculture, Vineland Station, Ontario
635 120B 1596
Canada Dept. Of Agriculture, Vineland Station, Ontario
Research Branch
Entomology Laboratory 1202
Canada Dept. Of Agriculture, Vineland Station, Ontario
Research Branch
Research Laboratory 222
Canada Dept. Of Agriculture, Vineland Station, Ontario
Research Laboratory 36B
Canada Dept. Of Agriculture, Vineland Station, Ontario
Research Station 1959
Canada Dept. Of Agriculture, Winnipeg, Manitoba 1391
Canada Dept. Of Agriculture, Winnipeg, Manitoba
Research Station 611 1434
Canada Dept. Of Agriculture, Winnipeg, Manitoba.
Research Station 673
CENTO Institute Of Nuclear Science, Teheran, Iran 574
576
Central Experiment Station, Trinidad, West Indies 1605
1914
Chemagro Corp., Kansas City, Mo.
Research Dept 1424
Chemagro Corp., Kansas City, Mo.
Research Dept. 1476 1B3B
Chemagro Corporation, Kansas City, Mo.
Station F
Field Reseach Section 1360
Chemical Control Section, Ottawa, Ontario 1674
Chevron Chemical Co., Richmond, Calif.
Ortho Division 1900
Chugai Pharmaceutical Co., Ltd.
Research Laboratories 527
Ciba, Ltd., Basle, Switzerland 1426
Citrus Experiment Station, Lake Alfred 1292
Civil Aeromedical Research Institute, Oklahoma City 1694
Clemson Agricultural College, S C 1423
Clemson College
Dept. Of Entomology And Zoology 432
Clemson College Truck Experiment Station, Charleston, S. C.
994 1969
Clemson College, S C 431
Clemson University
Dept. Of Entomology And Zoology 32 93 545
Clemson University
Dept. Of Entomology-zoology 477
Clemson University
South Carolina Agricultural Experiment Station
Dept. Of Entomology And Zoology 1915
Clemson University, Blackville, S.C.
Edisto Experiment Station
Dept. Of Entomology And Zoology 656
Clemson University, S.C.
Dept. Of Entomology And Zoology 1422 1924
Coastal Plain Experiment Station, Tifton, Ga. 1612
College Of Agriculture, Gwalion, M. P. India 26
Colonial Pesticides Research Unit, Arusha, Tanganyika
694
Comittee On Insecticide Terminology 1814
Commonwealth Institute Of Biological Control, Ottawa Canada
1236
Commonwealth Institute Of Entomology 113 24B
Commonwealth Sci. Indust. Res. Organ., North Ryde, Australia
Division Of Food Preservation B38
Commonwealth Scientific-Ind. Res. Organ., Ryde, Australia
Division Of Food Preservation 10B5
Compania Bananera De Costa Rica, Palmar
Palmar Research Station 1313
Conn. Agricultural Experiment Station, New Haven 1163
Conn. Agricultural Experiment Station, New Haven
Dept. Of Entomology 195B
Connecticut Agricultural Experiment Station
Dept. Of Plant Pathology And Botany 875
Connecticut Agricultural Experiment Station, New Haven
791 1936
Connecticut Agricultural Experiment Station, New Haven
Dept. Of Entomology 359
Cornell University 173 1095 1473
Cornell University
Dept. Of Entomology 341 1217 1894
Cornell University
Dept. Of Plant Pathology 979
Cornell University
Graduate School 1595
Cornell University
New York State College Of Agriculture
Dept. Of Entomology 1525
Cornell University
New York State College Of Agriculture
Dept. Of Entomology
Pesticide Residue Laboratory 1467
Cornell University
New York State College Of Agriculture
Pesticide Residue Laboratory 1493
Cornell University, Farmingdale, Long Island, N.Y.
Dept. Of Plant Pathology
Ornamentals Research Laboratory 916

Cornell University, Ithaca, N Y B1
Cornell University, Ithaca, N. Y. 17B 566 1114
1115 125B 1471 1B12
Cornell University, Ithaca, N. Y.
Dept. Of Entomology 351 1412 1524
15BB 1B54 1B67 1927
Cornell University, Ithaca, N. Y.
Dept. Of Entomology And Limnology 11B
Cornell University, Ithaca, N. Y.
Dept. Of Plant Pathology 755
Cornell University, Ithaca, N. Y.
N. Y. State College Of Agriculture
Dept. Of Entomology
Pesticide Residue Laboratory 1427
Cornell University, Ithaca, N. Y.
New York State College Of Agrlculture
Dept. Of Entomology 1468
Cornell University, Ithaca, N. Y.
New York State College Of Agriculture
Dept. Of Entomology
Pesticide Residues Laboratory 1469
Cornell University, Ithaca, N. Y.
New York State Veterinary College
Dept. Of Physical Biology 1706
Cornell University, Ithaca, N. Y.
U. S. Dept. Of Agriculture
Agricultural Research Service
Crops Research Division 1766
Cornell University, Ithaca, N.Y.
Department Of Entomology 171B
Cornell University, Ithaca, N.Y.
Dept. Of Entomology 675 1064
Cornell University, Ithaca, N.Y.
Dept. Of Entomology And Limnology 371
Cornell University, Ithaca, N.y.
Dept. Of Plant Pathology 756
Cornell University, Ithaca, New York
Dept. Of Entomology 65B 1677
Cornell University, Ithaca, NY
Dept. Of Plant Pathology 1303
Cornell University, Ithaca,New York
Department Of Entomology 1757
CSIRO, ryde, N. S. W., Australia
Division Of Food Preservation 504
Delaware Agricultural Experiment Station
Dept. Of Entomology 230
Delaware Agricultural Experiment Station, Newark 229
Delaware Agricultural Experiment Station, Newark
Dept. Of Entomology 136
Deleware Agricultural Experiment Station, Newark 135
Delta Branch Experiment Station, Stoneville, Miss. 1160
Denver Wildlife Research Center, Denver, Colo.
Bureau Of Sport Fisheries And Wildlife 1321
Dept. Of Agriculture, Kenya, Africa 674
Dept. Of Agriculture, Urganda
Section Of Entomology 1141
Dept. Of Biological Control, Riverside, Calif.
Citrus Research Center
Agricultural Experiment Station 166
Dept. Of Forestry Of Canada, Calgary, Alberta
Forest Research Laboratory 1904
Dept. Of Forestry Of Canada, Sillery, Quebec
Forest Research Laboratory 352
Dept. Of Forestry Of Canada, Victoria, B. C.
Forest Research Laboratory 35
Dept. Of Forestry Of Canada, Winnipeg, Manitoba
Forest Research Laboratory 104
Dept. Of Forestry, Ontarlo, Canada
Insect Pathology Research Institute 355
Dept. Of Forestry, Sault Ste. Marle, Ontario
Forest Insect Laboratory 567
Dept. Of Health, Education And Welfare, New Orleans
Public Health Service 1386
Dept. Of Health, Education, And Welfare, Savannah, Ga.
Public Health Service
Technology Branch
Communicable Disease Center 1460
Dept. Of Plant Physiology-and Pathology College Stat., Tex.
Texas Agricultural Experiment Station 1772
Dept. Of Scientific And Industrial Research
Pest Infection Laboratory, Slough, England 1B82
Dept. Of Scientific And Industrial Research, London, England
Laboratory Of The Government Chemist 1454
Ditton Laboratory, Maidstone, England 1373
Dominion Laboratory, Wellington, New Zealand
Dept. Of Scientific And Industrial Research 1B21
Dow Chemical Co. Midland, Mich.
Agricultural Chemical Research 1523
Dow Chemical Co., Midland, Mich. 14B9 1496 1497
Dow Chemical Co., Midland, Mich.
Agricultural Chemical Research 1530 1794
Dow Chemical Co., Midland, Mich.
Bioproducts Dept 1B60 1862
Dow Chemical Co., Midland, Mich.
Bioproducts Dept. 1B63 1970
Dow Chemical Co., Midland, Mich.
Edgar C. Britton Research Laboratory 1815
Dow Chemical Co., Seal Beach, Calif. 1B48
Dow Chemical Co., Walnut Creek, Calif.
Bioproducts Research 1B03 1B47
Dow Chemical Company, Midland, Mich.
Pitman-Moore Division
Biochemical Research Laboratory 1644
Dow Chemical Corp., Midland, Mich. 1B44
Duke University, Durham, N. C.
School Of Forestry 1871
Dutch State Mines, Geleen, Netherlands
Central Laboratory 1837
E. I. de Nemours And Co. Inc., Wilmington, Del.
Industrial And Biochemicals Dept. 1448
E. I. du Pont de Nemours And Co., Wilmington, Del.
Experimental Station
Industrial And Biochemicals Dept. 1487
E. R. Squibb And Sons, New Brunswick, N.J.
Pesticides Research 1675
East African Institute Of Malaria And Vector Borne Diseases
185
East African Trypanosomiasis Research Organization, Uganda
397
East African Trypanosomiasis Research Organization, Uganda
319
East African Trypanosomiasis Research Organization, Uganda
6B
Edinborurgh University, Scotland
Dept. Of Zoology
Midge Control Unit 114
Edinburgh School Of Agriculture 1785 17B6
Edinburgh School Of Agriculture, Scotland
Chemistry Dept. 1420
Eli Lilly And Co., Indianapolis, Ind. 1841
Eli Lilly And Co., Indianapolis, Ind.
Analytical Research And Developmental Laboratories 14B3
Eli Lilly Co., Indianapolis, Ind.
Analytical Development Dept. 1B69
Empire Cotton Growing Corporation
Cotton Research Station, Namulonge, Uganda 390
Entomology And Pathology Laboratory, Victoria, B. C. B6
Entomology Dept. 30B
Entomology Laboratory, Chatham, Ontario 281
Entomology Laboratory, Chatham, Ontario, Canada 551
Entomology Laboratory, Ontario, Canada 1177
Escuela de Agricultura, Monterrey, Mexico
Instituto Tecnologico y de Estudios Superiores 1010
Esso Research And Engineering Co., Linden, N. J. 1666
Experimental Farm, Charlottetown, Prince Edward Island
124B
Federal Ministry Of Agriculture, Salisbury Southern Rhodesia
Dept. Of Tsete And Trypanosomiasis Control And Reclamation
48B
Fisheries And Food, Surbition, England
Ministry Of Agriculture
Infestation Control Laboratory 1140
Fisons Pest Control Ltd., Saffron Walden, England
Chesterford Park Research Station 1445
Florida Agricultural Experiment Station, Gainesville 67B
1533
Florida Agricultural Experiment Station, Gainesville, Fla.
677
Florida Agricultural Experiments Stations
Watermelon And Grape Investigations Laboratory 974
Florida Citrus Experiment Station, Lake Alfred 1076
Florida Everglades Experiment Station, Belle Glade 423
Florida Presbyterian College 1645
Florida State Board Of Health, Winter Haven
Midge Research Project 559
Florida Sub-Tropical Experiment Station, Homestead 1273
FMC corp., Middleport, N. Y.
Niagara Chemical Division 1466
FMC corporation, Middleport, N Y
Niagara Chemical Division 265
FMC corporation, Richmond, Calif.
Niagara Chemical Division 1215 1542
Food And Drug Directorate, Ottawa, Canada 1425
Food And Drug Research Laboratories, Inc., Maspeth, N. Y.
1503
Food And Drug Research Laboratories, Inc., Maspeth, N.y.
1662
Food And Drug Research Laboratories, New York, N. Y. 1661
Food Machinery And Chemical Corp., Princeton, N. J.
Chemical Research Center 1B27

Food Machinery And Chemical Corporation, Richmond, Calif.
Niagara Chemical Division
Research Dept. 1673
Fordham University, Bronx, N Y
Dept Of Chemistry iB23
Fordham University, New York, N. Y. 1616
Forest Biology Laboratory, Fredericton, New Brunswick
S47
Forest Biology Laboratory, Sault Ste. Marie, Ontario 411
Forest Biology Laboratory, Victoria, British Columbia
7 14B
Forest Entomology And Pathology Branch, Ottawa, Ontario
Dept. Of Forestry 147
Forest Entomology And Pathology Lab., Fredericton, N. B.
61 1S4 1S6 22B 232
Forest Entomology And Pathology Laboratory, Calgary, Alberta
94 9S 97
Forest Entomology And Pathology Laboratory, Victoria, B. C.
53 87 10B3
Forest Entomology Laboratory, Manitoba, Canada 102
Forest Entomology Laboratory, Winnepeg, Manitoba 103
2S4
Forest Entomology Laboratory, Winnipeg, Manitoba 1S8
Forest Entomology-Pathology Laboratory, Calgary, Alberta
39 96 SB2 S83
Forest Entomology-Pathology Laboratory, Victoria, B. C.
331 37S 612 614 1B73
Forest Insect Laboratory, Sault ste. Marie, Ontario 72
214
Forest Insect Laboratory, Sault Ste. Marie, Ontario 132
133 142 237 407 1112 190B 1977
197B
Forest Insect Laboratory, Sault Ste. Marie, Ontario. 73
Forest Insect Laboratory, Sault Ste. Marie, Ontario 74
Forest Research Laboratory, Sillery, Quebec S8 292
Garden City Branch Agricultural Experiment Station, Kansas
1382
General Electric Company, Richland, Wash.
Biology Operation
Hanford Laboratories 1S72
Georgia Costal Plain Experiment Station, Tifton
Mississippi Agricultural Experiment Station 619
Georgia Cotton Control Association Inc.
Cotton Insect Scouts 1134
Georgia Experiment Station 1417
Georgia Experiment Station, Experiment 47 877
1250
Georgia State College, Atlanta 344 34S i333
Ghana Government
Ministry Of Health 713
Government Dept. Of Chemistry, Singapore, Malaya 1902
Gulf Coast Experiment Station, Bradenton, Fla. 1767
Hawaiian Sugarplanter s Association, Honolulu 1414
Hazelton Laboratories Inc., Falls Church, Va. 1670
Hazleton Laboratories, Falls Church, Va. 1669
Hebrew University Of Jerusalem B6B
Hebrew University, Jerusalem 867
Hebrew University, Jerusalem
Dept. Of Zoology D
Laboratory Of Entomology And Venomous Animals 1632
Hebrew University, Jerusalem, Israel
Hebrew University-Hadassah Medical School
Dept. Of Zoology And Pharmacology 1B13
Hebrew University, Rehovot, Israel
Agricultural Research Station 1441
Hercules Powder Co., Wilmington, Del. 1S99 1B33
Hercules Powder Co., Wilmington, Del.
Hercules Research Center 1B24
Herring Oil And Meal Industry Res. Inst., Straumsgrend, Nor.
1323
Hudson Valley Fruit Investigations Lab, Poughkeepsie, N. Y.
1407
Huntingdon College
Dept. Of Biology 1B95
Huntingdon College, Montgomery, Ala.
Dept. Of Biology 1332 1334
Idaho Agricultural Experiment Station B30
Ihara Agricultural Chemicals Institute, Shimizu, Japan
S43
Illinois Agricultural Experiment Station, Urbana 278
279
Illinois Natural History Survey 1072
Illinois Natural History Survey, Urbana 310 1107
i241 141B 17SS
Imperial Chemical Industries Ltd., Bracknell, England
Jealott s Hill Research Station 1143
Imperial Chemical Industries Ltd., Welwyn, England
Askers Research Laboratories 1BS3
Imperial Chemical Industries Ltd., Widnes, england
Research Dept. 304
Imperial College Field Station, Ascot, England i726
Imperial College Field Station, Ascot, England
Ashurst Lodge 1590
Imperial College Field Station, Sunninghill, Berks. 1S28
Indian Institute Of Science, Bangalore, India
Dept. Of Inorganic And Physical Chemistry 1858
Indian River Field Laboratory 774
Insect Control And Research, Inc., Baltimore, Md. 392
Insect Pathology Research Institute, Sault Ste. Marie, Ont.
624
Institut Fuer Biologische Schaedlingsbekaempfung, Darmstadt
Biologische Bundesanstalt Fuer Land- Und Forstwirtschaft
479
Institute Fuer Biologishe Schaedlingsbekaempfung, Darmstadt
Biologische Bundesanstalt Fur Land- Und Forstwirtschaft
1930
Institute Of Agriculture, Suwon, Korea
Dept. Of Entomology 1067
Instituto Superiore Di Sanita, Rome 170S
Intermountain Forest And Range Exp. Station, Boise, Idaho
1109
Iowa State University Of Science And Technology, Ames
S44
Iowa State University Of Science And Technology, Ames
Dept. Of Zoology And Entomology 616
Iowa State University, Ames
Dept. Of Animal Husbandry-Food Processing Laboratory
17B9
Iowa State University, Ames
Dept. Of Biochemistry And Biophysics 720
Istituto Superiore Di Sanita, Rome
Dept. Of Parisitology And Electronics 1657
Jealott s Hill Research Station, Berks, England 1620
Jute Agricultural Research Institute, Barrackdore, India
4B
Kansas Agricultural Experiment Station, Hays
Fort Hays Branch 1328
Kansas State University 1389
Kansas State University
Dept. Of Botany And Plant Pathology 9S9
Kansas State University
Dept. Of Entomology 220 610
Kansas State University, Manhattan 44S 446 472
1015 11B1 126B 134B 1474 1S1S 1934
1949
Kansas State University, Manhattan
Dept. Of Botany And Plant Pathology 927 9B7
9BB
Kansas State University, Manhattan
Dept. Of Entomology 1142 1316
Kansas State University, Manhatten
Dept. Of Surgery And Medicine 16S9
Kawanda Research Station, Kampala, Uganda
Dept. Of Agriculture 1734
Kentucky Agricultural Experiment Station, Lexington 100S
1634
King s College, Newcastle-upon-Tyne
School Of Agriculture 1324
Kirkpatrick, M E
University Of Maryland, College Park 14BB
Koninklijk Institut voor de Tropen, Amsterdam, Netherlands
177B
Kyotu University
Faculty Of Pharmaceutical Sciences
Dept. Of Biochemistry 1660
Lion Oil Co., El Dorado, Ark. 162S
London School Of Hygiene And Tropical Medicine 123
202 203
Los Angeles County Hospital, Los Angeles, Calif.
Loma Linda University
Laboratory Of Neurological Research 16B3
Louisana State University, Baton Rouge
Dept. Of Entomology 71
Louisiana State University
Agricultural Experiment Station
Dept. Of Entomology 3B4 1167
Louisiana State University
Botany Dept. i720
Louisiana State University
Dept. Of Entomology 406 1544
Louisiana State University
Dept. Of Entomology Research 16B
Louisiana State University, Baton Rouge 322 444
BB0 1246
Louisiana State University, Baton Rouge
Agricultural Experiment Station
Dept. Of Entomology 405 693
Louisiana State University, Baton Rouge
Dept. Of Entomology 666 778 120S
Louisiana State University, Baton Rouge

Entomology Research Division 1365
Louisiana State University, Baton Rouge
Louisiana Agricultural Experiment Station
Dept. Of Entomology Research 317
Louisiana State University, New Orleans
School Of Medicine
Dept. Of Tropical Medicine And Medical Parasitology 1361
Lower Rio Grande Valley Research And Extension Center 1269
Macaulay Institute For Soil Research, Craigiebuckler, U. K. 1967
Macdonald College, Quebec 184
Macdonald College, Quebec, Canada 115 233 234
Macdonald College, Quebec, Canada
Dept. Of Entomology And Plant Pathology 162
Massachusetts Agricultural Experiment Station
Dept. Of Entomology And Plant Pathology 1687
Massachusetts Agricultural Experiment Station, Amherst
Dept. Of Entomology And Plant Pathology 1519
Mauritius Sugar Industry Research Institute, Reduit, 249
McGill University, Quebec
Macdonald College
Dept. Of Entomology And Plant Pathology 512
McMaster University, Hamilton, Ontario 152
Meat Industry Research Institute Of New Zealand, Wellington 1325
Medical College Of Virginia, Richmond
Dept. Of Pharmacology 1635
Medical Field Service School, Fort Sam Houston, Tex.
Dept. Of Preventive Medicine 5B6
Mellon Institute, Pittsburgh, Pa. 1565 1566 1709
Merck Sharp And Dohme Research Laboratories, Rahway, N. J. 1285
Michigan State University
Dept. Of Horticulture 1799
Michigan State University, East Lansing 707
Michigan State University, East Lansing
Dept. Of Botany And Plant Pathology 971
Michigan State University, East Lansing
Dept. Of Entomology 320 1710 1964
Mid-West Grain Insects Investigations 324
Middle Eastern Regional Radioisotope Center, Cairo 644
Midwest Research Institute
Division Of Biological Sciences 1707
Ministry Of Agriculture, Cairo, Egypt 8
Ministry Of Agriculture, Fisheries, Food, Harpenden, England
Plant Pathology Laboratory 1415
Mississippi Agricultural Experiment Station, Stage College
Dept. Of Entomology 127
Mississippi Agricultural Experiment Station, State College 408
Mississippi State College
Mississippi Agricultural Station 663
Mississippi State University 85 522
Mississippi State University
Dept. Of Entomology 1061
Mississippi State University, State College
Dept. Of Plant Pathology And Physiology 842
Mississippi State University, State College
Dept. Of Zoology 1405
Missouri Agricultural Experiment Station 762
Monsanto Chemical Co., St. Louis, Mo.
Agricultural Division 1750
Monsanto Company, St. Louis, Mo.
Agricultural Division 480
Montana State College, Bozeman 1357 1358
N. C. Agricultural Experiment Station, Raleigh 258
N. J. Agricultural Experiment Station, New Brunswick
Dept. Of Entomology 840
N.C. State College 1299
Nagoya University
Faculty Of Agriculture
Laboratory Of Biochemistry 1800
National Bandb Univ. Inst. Of Agriculture, Rehovot, Israel 1539
National Inst. Of Agricultural Botany, Cambridge, England B39
National Vegetable Research Station, Wellesbourne, England 21
Nebraska Agricultural Experiment Station, Lincoln
Dept. Of Plant Pathology 970
Nebraska Agricultural Experiment Station, Mitchell
Scotts Bluff Branch 412 1604
New Jersey Agricultural Experiment Station, New Brunswick
Dept. Of Entomology 1301
New Mexico Agricultural Experiment Station, University Park
Dept. Of Botany And Entomology 577
New Mexico State University, University Park
Agricultural Experiment Station
Dept. Of Botany And Entomology 998
New York State Agricultural Experiment Station, Geneva 204 398 495 705 1187 1226 1227 1239 1702 1940
New York State Agricultural Experiment Station, Geneva
Dept. Of Entomology 1092
New York State Museum And Science Service 339 1932
New York State Museum And Science Service, Albany 1626
New York State Museum, Albany
Science Service 1577
Nopco Chemical Co., Harrison, N. J.
Fine Chemical Division 1B07
North Carolina Agricultural Experiment Station, Raleigh 1190 1401 1651 1985
North Carolina Agriculture Experiment Station, Raleigh
Entomology Dept. 689
North Carolina Dept. Of Agriculture, Raleigh 257
North Carolina State College
Pesticide Residue Laboratory 1437
North Carolina State College, Raleigh 917 1211 1470
North Carolina State College, Raleigh
Dept Of Plant Pathology 807
North Carolina State College, Raleigh
Dept. Of Plant Pathology 850
North Carolina State College, Raleigh
Plant Pathology Dept. 1047
North Carolina State University
Dept. Of Entomology 1075
North Carolina State University, Raleigh
Dept. Of Entomology 323 1078
North Dakota Agricultural College, Fargo
Dept. Of Plant Pathology 898
North Dakota Agricultural Experiment Station, Fargo 1230
North Florida Experiment Station, Quincy 1247
North Texas State University, Denton
Dept. Of Biology 636
Norwich Pharmacal Co., Norwich, N. Y.
Eaton Laboratories Division
Biochemistry Section 1449
Nova Scotia Museum, Halifax 55
Nutrilite Products, Inc., Buena Park, Calif. 367 1342 1901
Nutrition Foundation, Inc., New York, N. Y. 1486
Ohio Agricultural Experiment Station, Wooster 1045 1253 1271
Ohio Agricultural Experiment Station, Wooster
Dept. Of Plant And Botany Pathology 738
Ohio Agricultural Experiment Station, Wooster
Dept. Of Zoology And Entomology 550 654 1364 1658
Ohio Agricultural Research And Development Center, Wooster 1586
Ohio Agricultural Station, Wooster 1113
Ohio Agriculture Research-Development Center, Wooster
Dept. Of Zoology And Entomology 1597
Ohio State University
Dept. Of Zoology And Entonology 1399
Ohio State University, Columbus 1494
Ohio State University, Columbus
College Of Pharmacy 1159
Oklahoma State University, Stillwater 493
Oklahoma State University, Stillwater
Entomology Dept. 1275
Oklahoma State University, Stillwater
Oklahoma Agricultural Experiment Station
Dept. Of Botany And Plant Pathology 1031
Olin Mathieson Chemical Corp., Port Jefferson Station, N. Y. 944
Orange County Health Dept. Santa Ana, Calif. 1B81
Orange County Health Dept., Santa Ana, Calif. 206
Oregon State College, Corvallis
Dept. Of Agricultural Chemistry 1409 1478
Oregon State College, Corvallis
Dept. Of Botany And Plant Pathology 932
Oregon State College, Corvallis
Dept. Of Entomology 786
Oregon State University
Dept. Of Entomology 647 1585
Oregon State University, Corvallis 418 632
Oregon State University, Corvallis
Agricultural Chemistry Dept 1828
Oregon State University, Corvallis
Dept. Of Agricultural Chemistry 1526 1B26
Oregon State University, Corvallis
Dept. Of Agriculture Chemistry 1776
Oregon State University, Corvallis
Dept. Of Entomology 409 452 596 597 679 1603 1809 1960
Oregon State University, Corvallis, Ore.

Dept Of Agricultural Chemistry 14B4
Pennsylvana State University, University Park
Dept. Of Botany And Plant Pathology 779
Pennsylvania Agricultural Exper. Stat., University Park 149B
Pennsylvania Agricultural Experiment Station 1SB1
Pennsylvania State University
Dept Of Biochemistry 1504
Pennsylvania State University
Dept. Of Entomology 1696
Pennsylvania State University, Arendtsville
Fruit Research Laboratory 1B72
Pennsylvania State University, University Park 1330 1744 179S
Pennsylvania State University, University Park
Agricultural Experiment Station BS7 10B7
Pennsylvania State University, University Park
Dept. Of Botany And Plant Pathology
Agricultural Experiment Station 1038
Pest Infection Laboratory, Slough, England 1911
Pest Infestation Laboratory, Slough, England 1371
Pineapple Research Institute Of Hawaii, Honolulu, Hawaii 1S36
Pittsburgh Plate Glass Co., Barberton, Ohio
Chemical Division 1461
Plant Industry Station, Beltsville, Md. 900 1053
Pordue University, Lafayette, Ind.
Dept. Of Animal Sciences 1490
Potato Investigations Laboratory, Hastings, Fla. 68B
Public Health Service
Communicable Disease Center
Technology Branch
Biology/chemistry Section 515
Public Health Service, Atlanta, Ga.
Communicable Disease Center
Technology Branch
Toxicology Section 15B2
Purdue University 474
Purdue University
Dept. Of Botany And Plant Pathology 731 733
Purdue University
Dept. Of Entomology 652 1267
Purdue University
Dept. Of Plant Pathology 1022
Purdue University, Lafayette, Ind. 1121
Purdue University, Lafayette, Ind.
Agronomy Dept. 1404
Purdue University, Lafayette, Ind.
Dept. Of Entomology 1336 1937
Purdue University, West Lafayette, Ind.
Dept. Of Entomology 1223
Quebec Department Of Agriculture, Farnham, Canada
Information And Research Branch
Orchard Protection Laboratory 509
Regional Research Center, I. C. T. A., Trinidad, West Indies 1074
Research Branch, Ottawa, Canada
Statistical Research And Services 19B1
Research Division Of E. Merck AG Darmstadt 1SS7
Research Institute Of Pomology, Skierniewice, Poland
Dept. Of Plant Protection 490
Research Station, Kentville, Nova Scotia 1144
Rhode Island Agricultural Experiment Station, Kingston 1S0B
Richardson-Merrell, Inc., Ashland, Ohio
Hess And Clark Division 1529
Rohm And Haas Co., Philadelphia, Pa. 146S
Rothamsted Experimental Station 361
Rothamsted Experimental Station, Harpenden, England 275 1410 1S46 1979
Rothamsted Experimental Station, Harpenden, Herts. 1730
Royal College Of Science And Technology, Glasgow, Scotland
Dept. Of Food Service 1737
Rubber Research Institute Of Malaya, Kuala Lumpur
Pathological Division 1961
Rutgers - The State University
New Jersey Agricultural Experiment Station
Dept. Of Entomology And Economic Zoology 160B
Rutgers - The State University Of New Jersey, New Brunswick
Dept. Of Entomology And Economic Zoology 1962
Rutgers University, New Brunswick, N.J.
Dept. Of Entomology And Economic Zoology 1212
Rutgers-the State University 53S
Rutgers-the State University, New Brunswick, N. J.
Dept. Of Entomology 1344
Rutgers-the State University, New Brunswick, N.J. 416
S. B. Penick And Company, Jersey City, N. J.
Research Laboratory 1SSB
S. C. Agricultural Experiment Station, Clemson 1933
Shell Development Co., Modesto Calif. 34B
Shell Development Co., Modesto, Calif.
Agricultural Research Division 60B 1700
Shell Development Company, Modesto, Calif.
Agricultural Research Division 194 1S78 1S79
Smithsonian Institute, Washington, D. C.
Dept. Of Botany 200
South Dakota Agricultural Experiment Station, Brookings 13S1
Southeastern Forest Experiment Station, Asheville, N. C. 215
Southeastern Radiological Health Lab., Montgomery, Ala.
Division Of Radiological Health 1S12
Southwestern Washington Experiment Station, Vancouver 602 1234
Squibb Institute For Medical Research, New Brunswick, N. J. 16S3
St. Francis Xavier University, Antigonish, Nova Scotia S91
Stanford Research Institute, Menlo Park, Calif.
Dept. Of Chemistry 15B0
Stanford Research Institute, Menlo Park, Calif.
Life Sciences Division 607
State Agricultural Research Institute, Calcutta, India 1S50
State College, Miss. 462
State College, Miss.
Bollweevil Research Laboratory
U. S. Dept. Of Agriculture
Agricultural Research Service 1184
State Entomologist, Orissa, Bhubaneswar, India 1232
State Of California Dept. Of Public Health, Fresno
Bureau Of Vector Control 1637
State Plant Board Of Florida, Winter Haven 7S7
State University Of Iowa, Iowa City
College Of Medicine
Dept. Of Pharmacology 1610
Statistical Research Service
Dept. Of Forestry, Ottawa, Canada 19B2
Stauffer Chemical Co., Mountain View, Calif.
Biological Research Center 1B97
Stauffer Chemical Co., Richmond, Calif. 1430
Stauffer Chemical Company, Mountain View, Calif.
Agricultural Research Laboratory 1B49
Stauffer Research Center, Richmond, Calif. 18SS
Stauffer Research Laboratory, Richmond, Calif. 1S11
Sterling-winthrop Research Institute, Rensselaer, N. Y. 1643
Stored-Product Insects Laboratory, Savannah, Ga. 1697
Sub-Tropical Experiment Station, Homestead, Fla. 2S3 88S 1272
Swarthmore College 737
Swift And Co., Chicago, Ill.
Research Laboratories 1S14
Technical Advisory Service, Bayer, Managua, Nicaragua 121 11S3
Texas A And M College, College Station
Agricultural Experiment Station
Dept. Of Plant Sciences 1B51
Texas A And M University 12 1073
Texas A And M University, College Station 150
Texas A And M University, College Station
Texas Agricultural Experiment Station 236 125S
Texas A And M University, Weslaco 6B4
Texas A. And M. College, College Station
Dept. Of Entomology 1216
Texas A. And M. University 10SB 1126 1274 1714
Texas A$m University 1270
Texas A$M University, College Station
Dept. Of Entomology 633
Texas A$M University, College Station
Dept. Of Entomology
Agricultural Experiment Station 19S0
Texas Agricultural And Mechanical College, College Station
Texas Agricultural Experiment Station
Dept. Of Biochemistry And Nutrition 1377
Texas Agricultural Experiment Station 708 1607
Texas Agricultural Experiment Station
Entomology Dept. 516
Texas Agricultural Experiment Station
Substation No. 1S, Weslaco 173S
Texas Agricultural Experiment Station, College Station 10S9
Texas Agricultural Experiment Station, College Station
State Chemist Laboratory 1B11
Texas Agricultural Experiment Station, Crystal City 112S
Texas Agricultural Experiment Station, Weslaco 14S2
Texas Agricultural Research And Extension Center, Weslaco 1231
Texas Agriculture And Mechanical College, College Station

686
Texas Engineering Experiment Station, College Station
1571
The Connecticut Agricultural Experiment Station, New Haven
1098 1210 1229 1589
The Dow Chemical Co., Midland, Mich. 1861
The Dow Chemical Co., Midland, Mich.
Agricultural Chemical Research
Radiochemistry Laboratory 1816
The Ohio State University, Columbus
Dept. Of Botany And Plant Pathology 993
The Ohio State University, Columbus
Dept. Of Zoology And Entomology 1796
The Pennsylvania State University, Arendtsville
Fruit Research Laboratory 6
The Proctor And Gamble Co., Cincinnati, Ohio
Miami Valley Laboratories 1713
The State University, N. J.
Dept. Of Entomology 225
Torry Research Station, Aberdeen, England 1479
Tree Fruit Experiment Station, Wenatchee, Wash. 1138
U S Dept Of Agriculture, Kerrville, Tex.
Agricultural Research Service
Entomology Research Division 532
U. S. Agricultural Research Station, Salinas, Calif. 1383
U. S. Army Medical Service, Army Chemical Center, Md.
U. S. Army Environmental Hygiene Agency
Toxicology Division 1540
U. S. Army Quartermaster Research Center, Natick, Mass.
Pioneering Research Division 1985
U. S. Dept Of Agriculture, Beltsville, Md.
Agricultural Research Service
Crops Research Division 1036
U. S. Dept Of Agriculture, Beltsville, Md.
Agricultural Research Service
Entomology Research Division 1464
U. S. Dept Of Agriculture, Beltsville, Md.
Forest Service
Forest Insect Laboratory 1942
U. S. Dept Of Agriculture, Charleston, N. C.
Agricultural Research Service
Entomology Research Division 1091
U. S. Dept Of Agriculture, Mesa, Ariz.
Entomology Research Division 285
U. S. Dept Of Agriculture, Tempe, Arizona
Agricultural Research Service
Cotton Research Center 1309
U. S. Dept Of Health, Education And Welfare, Washington, D.
Food And Drug Administration
Division Of Pharmacology 1547
U. S. Dept Of Heath, Education And Welfare
Food And Drug Administration
Division Of Pharmacology 1543
U. S. Dept. Agriculture
Agricultural Research Service
Agricultural Engineering Research Division 1475
U. S. Dept. Agriculture, Gainesville, Fla.
Agricultural Research Service
Entomology Research Division 1327
U. S. Dept. Agriculture, Kerrville, Texas
Agricultural Research Service
Entomology Research Division 1567
U. S. Dept. Of Agriculture
Agricultural Marketing Service
Market Quality Research Division 1378
U. S. Dept. Of Agriculture
Agricultural Marketing Service
Market Quality Research Division
Stored-Product Insects Branch 1096
U. S. Dept. Of Agriculture
Agricultural Research Service
Agricultural Engineering Research Division 442
U. S. Dept. Of Agriculture
Agricultural Research Service
Crops Research Division 855 872 887
946 958 1006 1054 1280 1310
U. S. Dept. Of Agriculture
Agricultural Research Service
Entomology Research Division 20 40 91
129 269 299 300 328 377 394
420 422 461 463 467 563 638
667 701 983 1077 1101 1118 1170
1201 1222 1240 1257 1262 1346 1356
1459 1693 1805 1926 1973
U. S. Dept. Of Agriculture
Agricultural Research Service
Entomology Research Division
Kerrville, Texas 1345
U. S. Dept. Of Agriculture
Agricultural Research Service
Entomology Research Service 660 889
U. S. Dept. Of Agriculture
Agricultural Research Service
Market Quality Research Division
Stored-product Insects Research And Development Laboratory
1388
U. S. Dept. Of Agriculture
Agricultural Research Service
Market Quality Research Division
Stored-Product Insects Research Branch 650
U. S. Dept. Of Agriculture
Agriculture Research Service 70
U. S. Dept. Of Agriculture
Agriculture Research Service
Entomology Research Division 197 646
U. S. Dept. Of Agriculture
Crops Research Division 874
U. S. Dept. Of Agriculture
Economic Research Service
Farm Production Economics Division 718
U. S. Dept. Of Agriculture
Entomology Research Division 1742
U. S. Dept. Of Agriculture
Forage And Range Research Branch
Wisconsin Agricultural Experiment Station 796
U. S. Dept. Of Agriculture
Forest Service 680
U. S. Dept. Of Agriculture
Forest Service
Lake States Forest Experiment Station 1987
U. S. Dept. Of Agriculture
Forest Service
Pacific Southwest Forest And Range Experiment Station
740
U. S. Dept. Of Agriculture
Forest Service
Southeastern Forest Experiment Station 378
U. S. Dept. Of Agriculture
Plant Quarantine Division 846
U. S. Dept. Of Agriculture
U. S. Forest Service
Southeastern Forest Experiment Station 621
U. S. Dept. Of Agriculture
Western Washington Experiment Station
Agricultural Research Service
Crops Research Division 1278
U. S. Dept. Of Agriculture.
Agricultural Research Service
Crops Research Division 947
U. S. Dept. Of Agriculture. Kerrville, Tex.
Agricultural Research Service
Entomology Research Division 1394
U. S. Dept. Of Agriculture,
Agricultural Research Service
Entomology Research Division 54
U. S. Dept. Of Agriculture, Albuquerque, N. Mex.
Forest Insect And Disease Control Branch
Forest Service, Region 3
Division Of Timber Management 1570
U. S. Dept. Of Agriculture, Albuquerque, N. Mex.
Forest Service
Rocky Mountain Forest And Range Experiment Station 631
U. S. Dept. Of Agriculture, Alexandria, La.
Forest Service 1551
U. S. Dept. Of Agriculture, Ankeny, Iowa
Agricultural Research Service
Entomology Research Division 216 217 1974
U. S. Dept. Of Agriculture, Ankeny, Iowa
Agriculture Research Service
Entomology Research Division 1676
U. S. Dept. Of Agriculture, Asheville, N. C.
Forest Service
Southeastern Forest Experiment Station 1254
U. S. Dept. Of Agriculture, Asheville, N. C.
Forest Service
Southeastern Forest Experiment Station
Division Of Forest Insect Research 46
U. S. Dept. Of Agriculture, Asheville, N. C.
Southeastern Forest Experiment Station 5
U. S. Dept. Of Agriculture, Auburn, Ala.
Agricultural Research Service
Crops Research Division 1305
U. S. Dept. Of Agriculture, Baton Rouge, La.
Agricultural Research Service 831
U. S. Dept. Of Agriculture, Baton Rouge, La.
Agricultural Research Service
Entomology Research Division 376 549
U. S. Dept. Of Agriculture, Baton Rouge, La.
Agriculture Research Service
Entomology Research Division 318

U. S. Dept. Of Agriculture, Baton Rouge, La.
Louisiana Agricultural Experiment Station
Agricultural Research Service
Crops Research Division 914
U. S. Dept. Of Agriculture, Beltsville
Agricultural Research Service
Crops Research Division 1762
U. S. Dept. Of Agriculture, Beltsville, Md. 471
U. S. Dept. Of Agriculture, Beltsville, Md.
Agricultural Research Service
Crops Research Division 808 834 1013
1419 1768
U. S. Dept. Of Agriculture, Beltsville, Md.
Agricultural Research Service
Entomology Research Division 101 171 262
298 357 435 448 470 499 519
661 702 1133 1444 1480 1568 1983
U. S. Dept. Of Agriculture, Beltsville, Md.
Agricultural Research Service
Soil-Water Conservation Research Division 1790
U. S. Dept. Of Agriculture, Beltsville, Md.
Agriculture Research Service
Crops Research Division 1769
U. S. Dept. Of Agriculture, Beltsville, Md.
Agriculture Research Service
Entomology Research Division 327
U. S. Dept. Of Agriculture, Beltsville, Md.
Agricutural Research Service
Entomology Research Division 531
U. S. Dept. Of Agriculture, Beltsville, Md.
Entomology Research Division 295 296 1463
1878
U. S. Dept. Of Agriculture, Beltsville, Md.
Forest Service
Division Of Forest Insect Research
Forest Insect Laboratory 1951
U. S. Dept. Of Agriculture, Beltsville, Md.
Forest Service
Forest Insect Laboratory 1641 1845
U. S. Dept. Of Agriculture, Berkeley, Calif.
Pacific Southwest Forest And Orange Experiment Station
1986
U. S. Dept. Of Agriculture, Bogalusa, La. 723
U. S. Dept. Of Agriculture, Bozeman, Mont.
Agricultural Research Service
Entomology Research Division 478 1238 1256
1947
U. S. Dept. Of Agriculture, Brookings, S. Dak.
Agricultural Research Service
Entomology Research Division 391 1944 1945
U. S. Dept. Of Agriculture, Brookings, S. Dak.
Agriculture Research Service
Entomology Research Division 414
U. S. Dept. Of Agriculture, Brounsville, Tex.
Agricultural Research Service
Entomology Research Division 501
U. S. Dept. Of Agriculture, Brownsville, Tex. 1640
U. S. Dept. Of Agriculture, Brownsville, Tex.
Agricultural Research service
Entomology Research Division 503
U. S. Dept. Of Agriculture, Brownsville, Tex.
Agricultural Research Service
Entomology Research Division 69 131 330
333 379 402 500 502 552 555
556 585 1110 1171 1235 1910
U. S. Dept. Of Agriculture, Brownsville, Tex.
Agricultural Research Service
Entomology Research Service 160
U. S. Dept. Of Agriculture, Brownsville, Tex.
Agriculture Research Service
Entomology Research Division 584
U. S. Dept. Of Agriculture, Brownsville, Texas
Agricultural Research Service
Entomology Research Division 294 369 1120
U. S. Dept. Of Agriculture, Canal Point, Fla.
Agricultural Research Service
Entomology Research Division 395
U. S. Dept. Of Agriculture, Charleston, S. C.
Agricultural Research Service
Entomology Research Division 349 1094
U. S. Dept. Of Agriculture, College Station, Tex.
Agricultural Research Division
Entomology Research Service 1561
U. S. Dept. Of Agriculture, College Station, Tex.
Agricultural Research Service
Entomology Research Division 697 1165 1219
1560 1679 1680
U. S. Dept. Of Agriculture, College Station, Texas
Agricultural Research Service
Crops Research Division 1220
U. S. Dept. Of Agriculture, Corvallis, Ore.
Agrarian Research Service
Entomology Research Division 1552
U. S. Dept. Of Agriculture, Corvallis, Ore.
Agricultural Research Service
Entomology Research Division 492 565
U. S. Dept. Of Agriculture, Corvallis, Ore.
Forest Service
Pacific Northwest Forest And Range Experiment Station
Forestry Sciences Laboratory 594
U. S. Dept. Of Agriculture, Corvallis, Oregon
Agricultural Research Service
Entomology Research Division 1352
U. S. Dept. Of Agriculture, East Lansing, Mich.
Agricultural Research Service
Entomology Research Division 1228
U. S. Dept. Of Agriculture, East Lansing, Mich.
Agriculture Research Service
Entomology Research Division 1893
U. S. Dept. Of Agriculture, East Lansing, Mich.
Forest Service
North Central Forest Experimental Station 250
U. S. Dept. Of Agriculture, Fargo, N. Dak.
Agricultural Research Service 801
U. S. Dept. Of Agriculture, Florence, S. C.
Agricultural Research Service
Entomology Research Division 264 526 641
1137 1642
U. S. Dept. Of Agriculture, Florence, S.C.
Agrarian Research Service
Entomology Research Division 657
U. S. Dept. Of Agriculture, Fort Valley, Ga.
Agricultural Research Service
Entomology Research Division 847
U. S. Dept. Of Agriculture, Fresno, Calif.
Agricultural Research Service
Market Quality Research Division
Stored-product Insects Research Branch 338 649
U. S. Dept. Of Agriculture, Fresno, Calif.
Agricultural Research Service
StoredProduct Insects Laboratory 651
U. S. Dept. Of Agriculture, Gainesville, Fla.
Agricultural Research Service
Entomology Research Division 334 335 387
536 617 1439 1636 1655 1912
U. S. Dept. Of Agriculture, Gainesville, Fla.
Agriculture Research Service
Entomology Research Division 306
U. S. Dept. Of Agriculture, Gainsville, Fla.
Agricultural Research Service
Entomology Research Division 388 400
U. S. Dept. Of Agriculture, Gulfport, Miss.
Agricultural Research Service
Entomology Research Division 280
U. S. Dept. Of Agriculture, Gulfport, Miss.
Agricultural Research Service
Plant Pest Control 1428
U. S. Dept. Of Agriculture, Gulfport, Miss.
Agricultural Research Service
Plant Pest Control Division 498 1506 1639
U. S. Dept. Of Agriculture, Hoboken, N. J.
Agricultural Research Service
Entomology Research Division 1402 1678
U. S. Dept. Of Agriculture, Hoboken, N.J.
Agricultural Research Service
Entomology Research Division 721
U. S. Dept. Of Agriculture, Honolulu, Hawaii
Agricultural Research Division
Entomology Research Division 634
U. S. Dept. Of Agriculture, Honolulu, Hawaii
Agricultural Research Service
Entomology Research Division 1193 1923 1976
U. S. Dept. Of Agriculture, Honolulu, Hawaii
Agriculture Research Service
Entomology Research Division 625
U. S. Dept. Of Agriculture, Houston, Tex.
Agricultural Research Division
Entomology Research Division 703
U. S. Dept. Of Agriculture, Hyattsville, Maryland
Agricultural Research Service 710
U. S. Dept. Of Agriculture, Juneau, Alaska
Forest Service
Northern Forest Experiment Station 205 595 1264
U. S. Dept. Of Agriculture, Kearneysville, West Va.
Agricultural Research Service
Entomology Research Division 415
U. S. Dept. Of Agriculture, Kerrville, Tex
Agricultural Research Service
Animal Disease Eradication Division 358
U. S. Dept. Of Agriculture, Kerrville, Tex

Agricultural Research Service
Entomology Research Division 346
U. S. Dept. Of Agriculture, Kerrville, Tex.
Agricultural Research Center
Entomology Research Division 1340
U. S. Dept. Of Agriculture, Kerrville, Tex.
Agricultural Research Service
Animal Disease And Parasite Research Division 1366 1367
U. S. Dept. Of Agriculture, Kerrville, Tex.
Agricultural Research Service
Entomology Research Division 89 326 347 403 404 427 428 521 529 530 533 1329 1338 1341 1368 1369 1446 1447 1481 1609 1876
U. S. Dept. Of Agriculture, Kerrville, Tex.
Agricultural Research Service
Entomology Research Division 425 426
U. S. Dept. Of Agriculture, Kerrville, Tex.
Animal Disease And Parasite Research Division 1513
U. S. Dept. Of Agriculture, Kerrville, Texas
Agricultural Research Service
Entomology Research Division 528 1339
U. S. Dept. Of Agriculture, Laramie, Wyo.
Agricultural Research Service
Entomology Research Division 439
U. S. Dept. Of Agriculture, Lincoln
Agricultural Research Service
Crops Research Division 487
U. S. Dept. Of Agriculture, Lincoln, Neb.
Agricultural Research Service
Entomology Research Division 1145
U. S. Dept. Of Agriculture, Lincoln, Neb.
Agriculture Research Service
Entomology Research Division 141 1176
U. S. Dept. Of Agriculture, Madison, Wis.
Agriculture Marketing Service
Market Quality Research Division
Stored-products Insect Branch 316
U. S. Dept. Of Agriculture, Manhatten, Kansas
Agricultural Marketing Service
Market Quality Research Division
Stored-Products Insects Branch 1393
U. S. Dept. Of Agriculture, Mayaguez, Puerto Rico
Agricultural Research Service
Federal Experiment Station 1890
U. S. Dept. Of Agriculture, Mesa, Ariz.
Agricultural Research Service
Entomology Research Division 283 284 1195 1196
U. S. Dept. Of Agriculture, Mexico City, Mex.
Agricultural Research Service
Entomology Research Division 1392
U. S. Dept. Of Agriculture, Mexico City, Mexico
Agricultural Research Service
Entomology Research Division 518 623
U. S. Dept. Of Agriculture, Mexico City, Mexico
Agriculture Research Service
Entomology Research Division 1965
U. S. Dept. Of Agriculture, Mission, Tex.
Agricultural Research Service
Entomology Research Division 266 699
U. S. Dept. Of Agriculture, Mission, Tex.
Agriculture Research Service
Entomology Research Division 290
U. S. Dept. Of Agriculture, Monterrey, Mexico
Agriculture Research Service
Plant Pest Control Division 1090
U. S. Dept. Of Agriculture, Moorestown, N. J.
Agricultural Research Service
Entomology Research Division 182 223 484 485 572
U. S. Dept. Of Agriculture, Moorestown, N. J.
Agricultural Research Service
Plant Pest Control Control Division 1963
U. S. Dept. Of Agriculture, Moorestown, N.J.
Agricultural Research Service
Entomology Research Division 598
U. S. Dept. Of Agriculture, N. Dak.
Agricultural Research Service
Entomology Research Division
Metabolism And Radiation Research Laboratory 1906
U. S. Dept. Of Agriculture, Neb.
Agricultural Research Service
Entomology Research Division 704
U. S. Dept. Of Agriculture, New York, N.y.
Market Pathology Laboratory 806
U. S. Dept. Of Agriculture, North Carolina
Southeastern Forest Experiment Station 749
U. S. Dept. Of Agriculture, Ogden, Utah
Forest Service
Intermountain Forest And Range Experiment Station 63 1117
U. S. Dept. Of Agriculture, Ogden, Utah.
Forest Service
Intermountain Forest And Range Experiment Station 64
U. S. Dept. Of Agriculture, Orlanda, Fla.
Agricultural Research Service
Entomology Research Division 1331
U. S. Dept. Of Agriculture, Orlando, Fla
Agriculture Research Service
Entomology Research Division 542
U. S. Dept. Of Agriculture, Orlando, Fla.
Agricultural Research Service
Crops Research Division 822
U. S. Dept. Of Agriculture, Orlando, Fla.
Agricultural Research Service
Crops Research Division
Fruit And Nut Crops Research Branch 767
U. S. Dept. Of Agriculture, Orlando, Fla.
Agricultural Research Service
Entomology Research Division 399 401 534 581 1817
U. S. Dept. Of Agriculture, Orlando, Fla.
Agriculture Research Service
Entomology Research Division 350
U. S. Dept. Of Agriculture, Orlando, Fla.
Entomology Research Division 1806
U. S. Dept. Of Agriculture, Orono, Me.
Agricultural Research Service
Entomology Research Division 600
U. S. Dept. Of Agriculture, Otis Air Force Base, Mass.
Agricultural Research Service
Plant Pest Control Division 1576
U. S. Dept. Of Agriculture, Oxford, N. C.
Agricultural Research Service
Entomology Research Division 441
U. S. Dept. Of Agriculture, Paris, France
Agricultural Research Service
Entomology Research Division 45
U. S. Dept. Of Agriculture, Pineville, La.
Forest Service
Southern Forest Experiment Station 224
U. S. Dept. Of Agriculture, Portland, Ore.
Forest Service
Division Of Timber Management 18
U. S. Dept. Of Agriculture, Pullman, Wash.
Agricultural Research Service
Crops Research Division 836 1752
U. S. Dept. Of Agriculture, Raleigh, N. C.
Agricultural Research Service
Crops Research Division 919
U. S. Dept. Of Agriculture, Raleigh, N. C.
North Carolina State College
Agricultural Research Service
Dept. Of Plant Pathology And Crops Research Division 1046
U. S. Dept. Of Agriculture, Raleigh, N.C.
Agricultural Research Service
Crops Research Division 918
U. S. Dept. Of Agriculture, Richmond, Va.
Agricultural Research Service
Market Quality Research Division
Stored-product Insects Research Branch 1395
U. S. Dept. Of Agriculture, Riverside
Agricultural Research Service
Entomology Research Division 475
U. S. Dept. Of Agriculture, Riverside, Calif.
Agricultural Research Service
Entomology Research Division 343 373 396 659 1615 1622 1623
U. S. Dept. Of Agriculture, Riverside, Calif.
Agriculture Research Service
Entomology Research Division 434 645
U. S. Dept. Of Agriculture, Riverside, Calif.
Citrus Experiment Station 1204
U. S. Dept. Of Agriculture, Rome, Italy
Agricultural Research Service
Entomology Research Division 268
U. S. Dept. Of Agriculture, Salinas, Calif.
Agricultural Research Service
Crops Research Division 792 793
U. S. Dept. Of Agriculture, Savannah, Ga.
Agricultural Research Service
Market Quality Research Division 473
U. S. Dept. Of Agriculture, Savannah, Ga.
Agriculture Research Service
Market Quality Research Division
Stored-product Insects Research And Development Lab. 1477

U. S. Dept. Of Agriculture, St Lillwater, Okla.
Agricultural Research Service
Entomology Research Division 1613
U. S. Dept. Of Agriculture, St. Paul, Minn.
Forest Service
North Central Forest Experiment Station 2S1
U. S. Dept. Of Agriculture, State College, Miss. 1148
U. S. Dept. Of Agriculture, State College, Miss.
Agricultural Research Service 460
U. S. Dept. Of Agriculture, State College, Miss.
Agricultural Research Service
Boll Weevil Research Laboratory
Agricultural Engineering Research Division 1883
U. S. Dept. Of Agriculture, State College, Miss.
Agricultural Research Service
Entomology Research Division 32S 389 430
433 464 497 1103 1180 1916
U. S. Dept. Of Agriculture, State College, Miss.
Agricultural Research Service
Entomology Research Division
Boll Weevil Research Laboratory 66 496
U. S. Dept. Of Agriculture, State College, Miss.
Agricultural Research Service
Entomology Research Service 1896
U. S. Dept. Of Agriculture, State College, Miss.
Agriculture Research Service
Entomology Research Division 6S 1183
U. S. Dept. Of Agriculture, State College, Miss.
Mississippi Agricultural Experiment Station
Agricultural Research Service
Crops Research Division 1041
U. S. Dept. Of Agriculture, State College, Miss.
Mississippi Agricultural Experiment Station
Crops Research Division 1042
U. S. Dept. Of Agriculture, State College, Mississippi
Agricultural Research Service
Entomology Research Division 42
U. S. Dept. Of Agriculture, Stillwater, Okla.
Agricultural Research Service
Entomology Research Division 1132 1614
U. S. Dept. Of Agriculture, Stillwater, Okla.
Agricultural Research Service
Entomology Research Division
Oklahoma Agricultural Experiment Station 1130 1131
U. S. Dept. Of Agriculture, Stoneville, Miss.
Agricultural Research Service
Entomology Research Division 1166
U. S. Dept. Of Agriculture, Stoneville, Miss.
Agriculture Research Service
Entomology Research Division 1682
U. S. Dept. Of Agriculture, Stoneville, Miss.
Forest Service
Southern Forest Experiment Station 622
U. S. Dept. Of Agriculture, Summer, Wash.
Agricultural Research Service
Entomology Research Division 1100
U. S. Dept. Of Agriculture, Tallulah, La.
Agricultural Research Service
Entomology Research Division 61S
U. S. Dept. Of Agriculture, Tempe, Arizona
Agricultural Research Service
Crops Research Division
Cotton Research Center 1307
U. S. Dept. Of Agriculture, Tifton
Agricultural Research Service
Entomology Research Division 171S
U. S. Dept. Of Agriculture, Tifton, Ga.
Agricultual research Service
Entomology Research Division
Southern Grain Insects Research Laboratory, Tifton, Ga.
1889
U. S. Dept. Of Agriculture, Tifton, Ga.
Agricultural Research Service 1884 1919
U. S. Dept. Of Agriculture, Tifton, Ga.
Agricultural Research Service
Agricultural Engineering Research Division 1920 1921
U. S. Dept. Of Agriculture, Tifton, Ga.
Agricultural Research Service
Entomology Research Division 126 3S4 1243
1431 1432 1716 188S 1972 197S
U. S. Dept. Of Agriculture, Tifton, Ga.
Agricultural Research Service
Entomology Research Division
Ga. Coastal Plain Experiment Station 1899
U. S. Dept. Of Agriculture, Tifton, Ga.
Agricultural Research Service
Georgia Coastal Plain Experiment Station 491
U. S. Dept. Of Agriculture, Tifton, Ga.
Agriculture Research Service
Agricultural Engineering Research Division 1918
U. S. Dept. Of Agriculture, Tifton, Ga.
Agriculture Research Service
Entomology Research Division 1686
U. S. Dept. Of Agriculture, Tucson, Ariz.
Agricultural Research Service
Entomology Research Division 11 302 687
118S
U. S. Dept. Of Agriculture, Tucson, Ariz.
Agricultural Research Service
Entomology Research Division
Western Cotton Insects Investigations 501
U. S. Dept. Of Agriculture, Twin Falls, Idaho
Agricultural Research Service
Entomology Research Division 934 1909
U. S. Dept. Of Agriculture, University Park, Pa.
Agricultural Research Service
Crops Research Division 820
U. S. Dept. Of Agriculture, University Park, Pa.
Agricultural Research Service
Entomology Research Division 1194
U. S. Dept. Of Agriculture, Vicennes, Ind.
Agricultural Research Service
Entomology Research Division 14S8
U. S. Dept. Of Agriculture, Vincennes, Ind.
Agricultural Research Service
Entomology Research Division 363 S80 1892
U. S. Dept. Of Agriculture, Waco, Tex.
Agricultural Research Service
Entomology Research Division 172 1093 1200
1S84 1S8S
U. S. Dept. Of Agriculture, Wenatchee, Wash.
Agricultural Research Service
Entomology Research Division 421
U. S. Dept. Of Agriculture, West Haven, Conn.
Forest Service
Northeastern Forest Experiment Station SS4
U. S. Dept. Of Agriculture, West Lafayette, Ind.
Agricultural Research Service
Entomology Research Division 1259
U. S. Dept. Of Agriculture, Yakima, Wash.
Agricultural Research Service
Entomology Research Division 179 1207 19S6
U. S. Dept. Of Agriculture, Yakima, Wash.
Agriculture Research Service
Entomology Research Division 429
U. S. Dept. Of Agriculture, Yakima, Wash.
Entomology Research Division 1462 149S
U. S. Dept. Of Agriculture,logan, Utah
Agriculture Research Service
Entomology Research Division 4S3
U. S. Dept. Of Health, Education And Welfare, Savannah, Ga.
Bureau Of State Services
Public Health Service
Communicable Disease Center 1602
U. S. Dept. Of Health, Education And Welfare, Savannah, Ga.
Public Health Service
Communicable Disease Center
Technology Branch S24 S60
U. S. Dept. Of Health, Education-Welfare, Cincinnati, Ohio
Robert A. Taft Sanitary Engineering Center 1S63
U. S. Dept. Of Health, Education, And Welfare, Savannah, Ga.
Public Health Service
Bureau Of State Services
Communicable Disease Center 1846
U. S. Dept. Of Health, Education, And Welfare, Savannah, Ga.
Public Health Service
Communicable Disease Center 1671
U. S. Dept. Of HEW, brownsville, Tex.
U. S. Public Health Service
Quarantine Station 794
U. S. Forest Service, Asheville, N. C. 30
U. S. Forest Service, Asheville, N. C.
Southeastern Area S And PF
Division Of Forest Insect And Disease Control 29
U. S. Forest Service, Beltsville, Md.
Forest Insect Laboratory 1990 1991
U. S. Forest Service, Durham, N. C.
Southeastern Forest Experiment Station,
Forest Sciences Laboratory 169
U. S. Forest Service, Macon, Ga. 9SS
U. S. Forest Service, Portland, Ore.
Pacific Northwest Forest-Range Experiment Station 19
U. S. Forest Service, Portland, Oregon
Division Of Timber Management
Insect And Disease Control Branch 313
U. S. Naval Medical Field Research Lab., Camp Lejeune, N. C.
1349
U. S. Public Health Service
National Institutes Of Health
Division Of Research Grants 13S9

U. S. Public Health Service, Atlanta, Ga.
Communicable Disease Center
Toxicology Branch 1611
U. S. Public Health Service, Hamilton, Mont.
National Institutes Of Health
National Institute Of Allergy And Infectious Diseases
Rocky Mountain Lab 1574
U. S. Public Health Service, Savannah, Ga.
Communicable Disease Center
Technology Branch
Technical Development Laboratories 715
U. S. Regional Pasture Research Laboratory, Univ. Park, Pa 752
U. S. Regional Pasture Research Laboratory, Univ. Park, Pa. 751
U.s. Dept. Of Agriculture
Agricultural Marketing Service
Market Quality Research Division
Stored-product Insects Branch 13B1
U.s. Dept. Of Agriculture
Agricultural Research Service
Crops Research Division 76
U.s. Dept. Of Agriculture
Agricultural Research Service
Entomology Research Division 1233 1601
U.s. Dept. Of Agriculture, Baton Rouge, La.
Agricultural Research Service
Entomology Research Division 167
U.s. Dept. Of Agriculture, Beltsville, Md.
Agricultural Research Service
Entomology Research Division 239 436 437 514 1699 1943
U.s. Dept. Of Agriculture, Berkeley, Calif.
Forest Service
Pacific Southwest Forest And Range Experiment Station 244 1695
U.s. Dept. Of Agriculture, Brownsville, Tex.
Agricultural Research Service
Entomology Research Branch 1169
U.s. Dept. Of Agriculture, Brownsville, Tex.
Agricultural Research Service
Entomology Research Division 10B2 11BB
U.s. Dept. Of Agriculture, Brownsville, Texas
Agricultural Research Service
Entomology Research Division 1913
U.s. Dept. Of Agriculture, College Station, Tex.
Agricultural Research Service
Dept. Of Entomology 314
U.s. Dept. Of Agriculture, College Station, Tex.
Agricultural Research Service
Entomology Research Division 546
U.s. Dept. Of Agriculture, Florence, S.c.
Agricultural Research Service
Entomology Research Division 117B
U.s. Dept. Of Agriculture, Hoboken, N1j.
Agricultural Research Service
Entomology Research Division 1396
U.s. Dept. Of Agriculture, Kerrville, Tex.
Agricultural Research Division
Animal Disease And Parasite Research Division 1717
U.s. Dept. Of Agriculture, Kerrville, Tex.
Agricultural Research Service
Agricultural Engineering Research Division 1B79
U.s. Dept. Of Agriculture, Kerrville, Tex.
Agricultural Research Service
Entomology Research Division 1104 1516 1591 16B1
U.s. Dept. Of Agriculture, Lincoln, Neb.
Agricultural Research Service
Entomology Research Division 1175
U.s. Dept. Of Agriculture, Mesa And Tuscon, Arizona
Agricultural Research Service
Entomology Research Division 3B
U.s. Dept. Of Agriculture, Mission, Tex.
Agricultural Research Service
Entomology Research Division 90
U.s. Dept. Of Agriculture, Moorestown, N. J.
Agricultural Research Service
Entomology Research Division 34
U.s. Dept. Of Agriculture, Riverside, California
Agricultural Research Service
Entomology Research Division 342
U.s. Dept. Of Agriculture, Riverside, Fla.
Entomology Research Division 31
U.s. Dept. Of Agriculture, Sebring, Fla.
Agricultural Research Service
Animal Disease Eradication Division
Methods Development Unit 2B9
U.s. Dept. Of Agriculture, St. Paul 1, Minn.
Forest Service
Lake States Forest Experiment Station 252
U.s. Dept. Of Agriculture, State College, Miss.
Agricultural Research Service
Entomology Research Division
Boll Weevil Research Laboratory 11B2
U.s. Dept. Of Agriculture, Stoneville, Miss.
Agricultural Research Service
Entomology Research Division 11B9
U.s. Dept. Of Agriculture, Tallulah, La.
Agricultural Research Division
Nematodes 33
U.s. Dept. Of Agriculture, Tex.
Agricultural Research Service
Entomology Research Division 307
U.s. Dept. Of Agriculture, Tifton, Ga
Agricultural Research Service
Entomology Research Division 1069
U.s. Dept. Of Agriculture, Waco, Tex.
Agricultural Research Service
Entomology Research Division 10B9
U.s. Dept. Of Health, Education, And Welfare, Savannah, Ga.
Public Health Service
Communicable Disease Center
Technical Development Laboratories, Technology Branch 1633
Union Carbide Chemicals Co., South Charleston, W. Va. 14B2 1B70
Union Oil Co. Of California, Brea
Research Dept. 16B6
United Fruit Company, La Lima, Honduras
Tela Railroad Company
Tropical Research Division
Vining C. Dunlap Laboratories 754
Univ. Of Vermont College Of Medicine, Burlington
Dept. Of Pharmacology 1712
University Botany Laboratory, Madras, India 1007
University Of Adelaide, South Australia
Waite Agricultural Research Institute 366 50B
University Of Alberta Dept. Of Entomology, Edmonton 5B5
University Of Alberta, Edmonton
Dept. Of Entomology 209 211 511
University Of Alberta, Edmonton, Canada 192B
University Of Alexandria, Egypt
College Of Agriculture 372
University Of Arizona 670 671 1263
University Of Arizona
Dept. Of Entomology 1BB7
University Of Arizona, Tempe
Cotton Research Center
Dept. Of Entomology 672
University Of Arizona, Tucson 241
University Of Arizona, Tucson
Agricultural Experiment Station
Dept. Of Entomology 23 161
University Of Arizona, Tucson
College Of Agriculture
Dept. Of Plant Pathology B49
University Of Arizona, Tucson
Dept. Of Entomology 22 321
University Of Arizona, Tucson
Dept. Of Plant Pathology 1315
University Of Arkansas
Dept. Of Entomology 1221
University Of Arkansas, Fayetteville 297
University Of Assiut, Egypt, U. A. R.
Pest Control Dept. 1592
University Of Baghdad, Abu Ghraib, Iraq
College Of Agriculture
Dept. Of Entomology And Zoology 1060
University Of British Columbia, Vancouver, British Columbia
Dept. Of Zoology 20B
University Of California Citrus Experiment Station 860
University Of California Citrus Research Center, Riverside
Agricultural Experiment Station
Dept. Of Entomology 1509
University Of California School Of Medicine, San Francisco
Dept. Of Medicine
Division Of Dermatology 116
University Of California, Albany
Dept. Of Biological Control 1320
University Of California, Berkeley 119 120 140 243 627 1062 1152 1173 1242
University Of California, Berkeley
Agriculture Experiment Station 43
University Of California, Berkeley
California Agricultural Experiment Station
Dept. Of Entomology And Parasitology B05
University Of California, Berkeley
Dept Of Entomology
U S Public Health Service 1652

University Of California, Berkeley
Dept. Of Biological Control
Laboratory Of Insect Pathology 513 629
University Of California, Berkeley
Dept. Of Entomology And Parasitology 218 219
255 374 1276 1852
University Of California, Berkeley
Dept. Of Entomology And Parasitology
Division Of Biological Control 100
University Of California, Berkeley
Dept. Of Insect Pathology 626 628 643
683
University Of California, Berkeley
Dept. Of Insect Pathology And Dept. Of Biological Control
494
University Of California, Berkeley
Dept. Of Plant Pathology 910 999 1050
University Of California, Berkeley
Dept. Of Zoology 682
University Of California, Berkeley
Division Of Biological Control 4
University Of California, Berkeley
Division Of Biological Control
Dept. Of Entomology Ad Parasitology 41
University Of California, Berkeley
Division Of Entomology And Acarology 109 1009
1593
University Of California, Berkeley
Division Of Parasitology 267 1343
University Of California, Berkeley
Forest Service
Pacific Southwest Forest And Range Experiment Station
221
University Of California, Berkeley
U. S. Public Health Service 1008
University Of California, Davis 16 273 1065
1081 1545 1758 1801 1839
University Of California, Davis
Agricultural Toxicology And Residue Research Laboratory
469 1433 1537
University Of California, Davis
Agricultural Toxicology And Residue Research Laboratory.
557
University Of California, Davis
California State Department Of Public Health
Bureau Of Vector Control 1631
University Of California, Davis
Dept. Of Botany 1739
University Of California, Davis
Dept. Of Entomology 274 410 863
1080
University Of California, Davis
Dept. Of Entomology And Parasitology 1931
University Of California, Davis
Dept. Of Entomology And Pathology 886
University Of California, Davis
Dept. Of Plant Pathology 758 922 975
University Of California, Davis
Dept. Of Soils And Plant Nutrition 1836
University Of California, Davis
Dept. Of Zoology 1980
University Of California, Davis
Pesticide Residue Research 468 1538
University Of California, Edmonton
Dept. Of Entomology 210
University Of California, Los Alamos, N. Mex.
Los Alamos Scientific Laboratory 1598 1732 1842
University Of California, Los Angeles 370 906
University Of California, Los Angeles
Dept. Of Bacteriology 695
University Of California, Los Angeles
Dept. Of Botany 986 1040
University Of California, Los Angeles
Dept. Of Entomology 1903
University Of California, Los Angeles
Dept. Of Zoology 329
University Of California, Los Angeles
School Of Medicine 1781
University Of California, Riverside 1146 1147 1293
1600 1627 1649 1690 1691 1692 1825
1829 1830
University Of California, Riverside
Agricultural Experiment Station 282 1398 1522
1583 1859
University Of California, Riverside
Citris Research Center
Agricultural Experiment Station 714
University Of California, Riverside
Citrus Experiment Station 604 800 1218
University Of California, Riverside
Citrus Experiment Station
Dept. Of Biological Control 826
University Of California, Riverside
Citrus Reseach Center
Agricultural Experiment Station 1390
University Of California, Riverside
Citrus Research Center
Agricultural Experiment Station 164 271 520
538 540 606 637 1106 1192 1521
1549 1656 1850 1966
University Of California, Riverside
Citrus Research Center
Agricultural Experiment Station
Dept. Of Biological Control 59 60 1429
University Of California, Riverside
Citrus Research Center
Dept. Of Biological Control 1548
University Of California, Riverside
Citrus Research Center And Agricultural Experiment Station
587
University Of California, Riverside
Citrus Research Center And Agricultural Experiment Station
Dept. Of Entomology 1628
University Of California, Riverside
Department Of Entomology 662
University Of California, Riverside
Dept. Of Biological Control 165 287 1057
1161 1197 1198
University Of California, Riverside
Dept. Of Entomology 539 562 605
1119 1123 1355 1647 1648 1650 1831
1832
University Of California, Riverside
Dept. Of Plant Pathology 1018 1798
University Of California, Riverside
Dry Lands Research Institute 393
University Of California, Riverside
Plant Biochemistry Dept. 1237
University Of California, San Francisco
Dept. Of Medicine
Division Of Dermatology 466
University Of Chicago
American Meat Institute Foundation
Division Of Animal Feeds 1711
University Of Cincinnati, Ohio
Kettering Laboratory 1573
University Of Delaware
Dept. Of Plant Pathology 1654
University Of Delaware, Newark
Dept. Of Agricultural Biochemistry And Food Technology
Dept. Of Plant Pathology 883
University Of Delaware, Newark
Dept. Of Plant Pathology 1793
University Of Durham
King s College, Newcastle upon Tyne 525
University Of Florida, Belle Glade
Everglades Experiment Station 609 992
University Of Florida, Bradenton
Gulf Coast Experiment Station 843
University Of Florida, Gainesville
Agricultural Experiment Station 1421
University Of Florida, Gainesville
College Of Agriculture 438
University Of Florida, Gainesville
College Of Agriculture
Agricultural Experiment Station 1856
University Of Florida, Gainesville
Dept. Of Entomology 381
University Of Florida, Gainesville
Florida Agricultural Experiment Station 1532
University Of Florida, Lake Alfred
Citrus Experiment Station 1703 1968
University Of Georgia
Dept. Of Entomology And School Of Forestry 1116
University Of Georgia, Athens
Agronomy Dept 1102
University Of Hawaii
College Of Tropical Agriculture 1684
University Of Hawaii
Hawaii Agricultural Experiment Station
Dept. Of Entomology 909
University Of Hawaii, Honolulu 1907
University Of Hawaii, Honolulu
College Of Topical Agriculture
Dept. Of Entomology And Poultry Science 1689
University Of Hawaii, Honolulu
College Of Tropical Agriculture
Dept. Of Entomology And Dept. Of Poultry Science 1688
University Of Hawaii, Honolulu
Hawaii Agricultural Experiment Station

Dept. Of Entomology 642
University Of Idaho, Aberdeen 744
University Of Idaho, Moscow
College Of Forestry 1306
University Of Idaho, Moscow
Dept. Of Entomology 196 589
University Of Illinois 1191
University Of Illinois
Dept. Of Entomology 664 1819 1835
University Of Illinois
Dept. Of Plant Pathology 1840
University Of Illinois
Dept. Of Veterinary Physiology And Pharmacology 1624
University Of Illinois, Urbana 1929
University Of Illinois, Urbana
Dept. Of Entomology 1569 1698 1779
University Of Illinois, Urbana
Dept. Of Plant Pathology 1788 1797
University Of Illinois, Urbana
Illinois Natural History Survey 260
University Of Kentucky 590
University Of Kentucky, Lexington 1003 1244
University Of Kentucky, Lexington
Agricultural Experiment Station 1122 1249 1347
University Of Kentucky, Lexington
Dept. Of Agronomy 784
University Of London, England
St. Mary s Hospital Medical School
Dept. Of Biochemistry 1810
University Of Maine
Dept. Of Entomology 303
University Of Maine, Orono 1505
University Of Manitoba
Dept. Of Entomology 575
University Of Manitoba, Winnepeg
Dept. Of Entomology 77 198 199
University Of Manitoba, Winnipeg
Dept. Of Entomology 573
University Of Maryland 558
University Of Maryland
Dept. Of Botany 1559
University Of Maryland
Dept. Of Entomology 630
University Of Maryland
Dept. Of Poultry Science 1354
University Of Maryland, College Park 588 1245
University Of Maryland, College Park
Dept. Of Entomology 1158 1442 1500
1507 1638 1888
University Of Massachusetts
Dept. Of Agriculture
Dept. Of Entomology And Plant Pathology 696
University Of Massachusetts
Dept. Of Entomology And Plant Pathology 1520
University Of Massachusetts
Dept. Of Environmental Sciences 568
University Of Massachusetts, Amherst 1380
University Of Massachusetts, Amherst
Dept. Of Entomology And Plant Pathology 1070 1518
University Of Massachusetts, Amherst
Depts. Of Chemistry And Botany 1701
University Of Massachusetts, East Wareham
Cranberry Experiment Station 653 1056 1719
University Of Md., Portageville
Delta Center
Mo. Agricultural Experiment Station 1922
University Of Miami
School Of Medicine 1587
University Of Miami, Coral Gables, Fla.
School Of Medicine
Dept. Of Pharmacology 1370
University Of Michigan, Ann Arbor
Fission Products Laboratory 1562
University Of Minnesota
Dept. Of Plant Pathology And Botany 765
University Of Minnesota, St Paul
Institute Of Agriculture
Dept. Of Plant Pathology And Botany 943
University Of Minnesota, St. Paul
Dept. Entomology, Fisheries, And Wildlife 1108
University Of Minnesota, St. Paul
483
Dept. Of Animal Husbandry 1472
University Of Minnesota, St. Paul
Dept. Of Entomology, Fisheries, And Wildlife 332
356 561 578 620 1084
University Of Minnesota, St. Paul
Dept. Of Plant Pathology And Botany 991
University Of Minnesota, St. Paul
Fisheries And Wildlife
Dept. Of Entomology 180 181
University Of Minnesota, St. Paul
Institute Of Agriculture
Dept. Of Plant Pathology And Botany 990 1375
University Of Missouri 449
University Of Missouri, Columbia
Dept. Of Entomology 1891
University Of Missouri, Portageville
Delta Center
Missouri Agricultural Experiment Station 1917
University Of Munich, Germany
Institut fuer Physiologie und Ernaehrung der Tiere 1440
University Of Nebraska
Dept. Of Plant Pathology 747
University Of Nebraska, Lincoln 276
University Of Nebraska, Lincoln
Dept. Of Entomology 476 1984
University Of Nevada, Reno
Dept. Of Agricultural Chemistry 1553
University Of New South Wales, Kensington, Australia 1957
University Of Oklahoma, Norman
Dept. Of Zoology 67
University Of Perugia, Italy
Instituti di Industrie Agrarie 1443
University Of Puerto Rico
School Of Medicine
School Of Tropical Medicine 712
University Of Saskatchewan 50 51
University Of Tennessee 1151
University Of Tennessee
Agricultural Experiment Station
Dept. Of Entomology 291
University Of Tennessee, Knoxville
Agricultural Experiment Station
Dept. Of Agricultural Biology 315
University Of Tennessee, Knoxville
Agricultural Experiment Station
Dept. Of Entomology 1071
University Of Texas Medical Branch, Galveston
Dept. Of Preventive Medicine And Public Health
Laboratory Of Medical Entomology 541
University Of Toronto, Ontario 117
University Of Toronto, Ontario
Dept. Of Zoology 706
University Of Western Ontario, London 107
University Of Western Ontario, London
Dept. Of Zoology 106 108
University Of Western Ontario, London, Canada
Dept. Of Zoology 261 443 579
University Of Wisconsin 1014 1088
University Of Wisconsin
Dept. Of Entomology 163 176 510
University Of Wisconsin
Research Committee, Graduate School 912
University Of Wisconsin Medical School, Madison
McArdle Memorial Laboratory For Cancer Research 1436
University Of Wisconsin, Madison 698 1099 1335
University Of Wisconsin, Madison
Dept Of Entomology 1164
University Of Wisconsin, Madison
Dept. Of Entomoloby 618
University Of Wisconsin, Madison
Dept. Of Entomology 124 125 149
286 455 456 459 489 1162 1199
1213 1214 1322 1451 1492 1760 1761
1905
University Of Wisconson 984
University Of Wyoming 486
University Of Wyoming
Division Of Veterinary Science 1704
University Of Wyoming, Laramie 1353 1672
University Park, Pa.
U. S. Regional Pasture Research Laboratory, Univ. Park, Pa
818
Upjohn Co., Kalamazoo, Mich. 1759
Upsala College, East Orange, N. J.
Biology Dept. 888
Utah State University 1939
Va. Agricultural Experiment Station, Blacksburg 945
Va. Polytechnic Institute, Blacksburg
Dept. Of Entomology And Dept. Of Forestry And Wildlife
Vesicol Chemical Corp., Chicago, Ill. 1501
Virginia Agricultural Experiment Station, Blacksburg 336
Virginia Agricultural Experiment Station, Blacksburg
Dept. Of Entomology 1362
Virginia Agricultural Experiment Station, Charlottesville
Piedmont Research Laboratory 10
Virginia Agricultural Experiment Station, Chatham
Bright Tobacco Research Station 44
Virginia Agricultural Experiment Station, Holland

Tidewater Research Station 1555
Virginia Agricultural Experiment Station, Winchester 98
447
Virginia Agriculture Experiment Station, Charlottesville
Piedmont Research Laboratory 1554
Virginia Division Of Forestry, Charlottesville
Forest Insect And Disease Investigations 153
Virginia Polytechnic Inst., Blacksburg
Dept. Of Entomology 337
Virginia Polytechnic Institute
Dept. Of Entomology 700
Virginia Polytechnic Institute, Blacksburg 1156
Virginia Polytechnic Institute, Blacksburg
Dept. Of Biology 454
Virginia Polytechnic Institute, Blacksburg
Dept. Of Entomology 413 1363
Virginia Polytechnic Institute, Blacksburg
Virginia Agricultural Experiment Station 1455
Virginia Polytechnic Institute, Blacksburg, Va.
Dept Of Biochemistry And Nutrition 1457
Virginia Polytechnic Institute, Blacksburg, Va.
Dept. Of Entomology And Dept. Of Forestry And Wildlife
1155 1157
Washington Agriculture Experiment Station, Pullman 1400
Washington State University
College Of Agriculture
Dept. Of Entomology 52
Washington State University
Southwestern Research Unit 603
Washington State University
Washington State Dept. Of Agriculture, Prosser
Irrigation Experiment Station 746
Washington State University, Prosser
Irrigation Experiment Station 775 1086
Washington State University, Pullman 948
Washington State University, Pullman
Dept. Of Agricultural Chemistry 1834
Washington State University, Pullman
Dept. Of Entomology 1808
Washington State University, Puyallup
Western Washington Experiment Station 1485
Washington State University, Vancouver
Southwestern Washington Research Unit 601
West Africa Cocoa Research Institute, Ghana 854
West Virginia Agricultural Experiment Station 365
West Virginia Agricultural Experiment Station, Morgantown
364 1154
West Virginia University 1337
West Virginia University
Dept. Of Microbiology 1708
West Virginia University
West Virginia Agricultural Experiment Station 188
West Virginia University, Morgantown 1127
Western Regional Research Laboratory, Albany, Calif. 1491
1818
Western Washington Experiment Station, Puyallup 1297
Weyerhaeuser Company, Centralia, Wash.
Forest Research Center 1150
Weyerhaeuser Company, Centralia, Wash.
Forestry Research Center 1629
Weyerhaeuser Forestry Research Center, Centralia, Wash.
1630
Wilkens Instrument And Research Inc., Walnut Creek, Calif.
1880
Williams, D J
Commonwealth Institute Of Entomology 75
Wisconsin Dept. Of Agriculture 36
World Health Organization, Lagos, Nigeria
Insecticide Testing Unit 1438

☆ U.S. GOVERNMENT PRINTING OFFICE: 1967 0-250-987

U.S. DEPARTMENT OF AGRICULTURE
WASHINGTON, D.C. 20250

OFFICIAL BUSINESS

To stop mailing ☐ or to change your address ☐ send this sheet with new address to Pesticides Information Center, National Agricultural Library, Washington, D.C. 20250.

POSTAGE AND FEES PAID
U.S. DEPARTMENT OF AGRICULTURE